

# Welcome to GSA Fleet's Desktop Workshop



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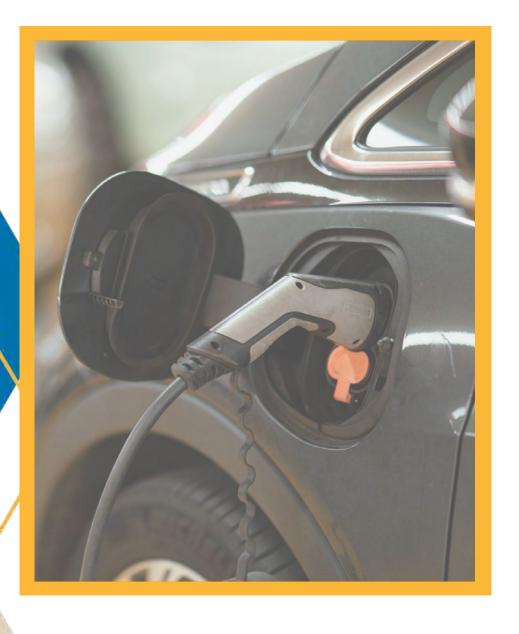
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Recordings of GSA Fleet Desktop Workshops are available at: <a href="http://bit.ly/DtWRecordings">http://bit.ly/DtWRecordings</a>





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# **BPA Award Highlights**

- Includes hardware, software, O&M, make-ready/site assessment services & more!
- Contract Length: 60 Months
- 16 offerors were awarded, including 9 small businesses
- Over 30 EVSE brands and 1,165 line items
- Onboarding Opportunities
- PBS Contractors can buy from FAS BPA holders creating a 1 stop shop for stations & installation
- View all offerings, pricing and BPA-holder information at <u>qsa.qov/evse</u>

## What's on the BPA?

#### **Services**

**CLIN 0006** 

#### **Hardware**

CLINs 0001, 0002, 0003, & 0011

#### Management Software & Network Plans

CLINs 0007 & 0008

#### **Warranty Plans**

**CLIN 009** 

### Charging as a Service

CLINs 002, 003, & 010

Site assessment
Validation
Permitting
Basic installation
Utility coordination
Wiring
and more

Level-1 Charger Level-2 Charger DC Fast Charger Solar Charging Portable Charging Accessories Power management
Network plans
Real-time analytics
Data plans
Cloud software

Parts-only
Parts & labor
Onsite repair
Replacement
1-5 year coverage

Assembly
Activation
Ongoing operator &
driver support
Charging data &
analytics
Power management,
and basic installation

# Agenda

- ☐ District Fleet: Presented by <u>Dan MacDonald</u>
- □ PLEMCo: Presented by <u>Tim Hatiaman</u>
- Siemens: Presented by <u>Jim Plourde</u>, <u>Brandy Henson</u>
- PSC Energie: Presented by <u>Tom Tracey</u>, <u>Chris Vargas</u> and

Danilo Tosovic

- □ OSC: Presented by <u>Mark Shaffer</u> and <u>Colin Murchie</u>
- ☐ Lioce Group: Presented by <u>Dominic Day</u>
- ☐ Carahsoft: Presented by <u>Matt Bianco</u>, <u>Matt Rattigan</u> and <u>Casey</u> <u>Oesterle</u>
- Global Enterprises/Livingston: Presented by <u>Scotty</u>

  Browning, <u>Will DeRuve</u>, <u>Scott Smith</u> and <u>Randy Livermore</u>



# **EV Charging Station Infrastructure**

Level-1 Charging 110V/120V

Level-2 Charging 208V/240V

## DC Fast Charger 208V/480V









- J1772 is standard
- 4-6 miles per hour charge time
- \$0-\$3K

- J1772 is standard (Tesla's
- 10-20 miles per hour charge time

come with adapter)

• \$500-\$12,000



Tesla, SAE Combo, CHAdeMO

- Most vehicles use CCS (Tesla comes with adapter) Nissan Leaf uses CHAdeMo
- 50-90 miles in 30 minutes
- **\$32,000+**

- Finding a charger <u>plugshare.com</u> or <u>DOE Alternative Fueling Station Locator</u>
- Sites like <u>abetterrouteplanner.com</u> help you plan for charging on trips



gsafleetafvteam@gsa.gov



# Charging Forward > Electrification of the Federal Fleet

**Teaming Partners** 





District Fleet, LLC 612 M St NW Washington, DC 20001 GSA MAS Contract: 47QMCA20D001A

SIN: 532112, SIN: 3361E Entity ID: Z7MWAAFHSNL9 HUBZone / SDB Proudly Supporting Made in USA

**GSA EVSE BPA Holder** 









### Why District Fleet?

- 20+ Years of Federal fleet management experience
- Subject Matter Experts (SMEs) in fleet electrification
- Licensed distributor of multiple Level 2 and DCFC OEMs
- Nationwide network of fleet industry installers and service providers
- Open Ratings Past Performance Rating of 97+ with high marks in Responsiveness, Reliability, and Quality.
- SBA Certified HubZone Small Business/ SDB
- GSA Multiple Award Schedule (MAS) contract holder
- GSA EVSE BPA Holder

### **Turnkey Fleet Electrification Services**



#### **Acquisition Planning**

We will help you develop a streamlined procurement process to purchase and deploy Electric Vehicle Supply Equipment (EVSE).



#### Site Assessments

Is your site EV Ready? Let us help you assess electrical capacity, parking availability, and potential infrastructure upgrades.



### Equipment & Software Selection

Choose from a portfolio of fast, safe, secure, and reliable EV charging stations and OCPP compliant charging management software.



### Installation & Onboarding Services

Whether leading or coordinating self-installs, we can help oversee successful installation and commissioning of all systems.



### Monitoring & Reporting

Secure data monitoring and reporting can ensure smooth operations and improve user experience. Add routine service and extended warranty for peace of mind.







# **Hardware Offerings**

(CLIN 0002 & 0003)

Salient Characteristics						
Level 2	AC power output 6.6kW to 19.2kW					
DCFC	DC power output > 22kW					
Network Capable	Cellular 4G / Ethernet					
Software	1 Yr data service included					
Mount	Wall or Pedestal					
Port	Single or Dual					
Authentication	All offerings are RFID Enabled and capable of collecting fees via Credit Card reader, QR, or Mobile App					
Energy Star	Energy Star Certified					
Safety	Compliance with UL and Regional Safety Standards					
Delivery FOB Dest.	L2 60 Days / DCFC 120 Days					

Level 2 (56 Line Items)

DCFC (27 Line Items)

**BTC POWER** 















# Level 2 EVSE (CLIN 0002)







### PowerCharge™









#### JuiceBar Gen3

- Made in USA
- 32A, 40A, 48A, 80A
- Single or Dual
- Wall or Pedestal
- Integrated Cable Management
- OCPP
- V2G Capable
- White Labeling

#### **BTC Power**

- Assembled in USA
- 30A, 40A, 70A
- Single or Dual
- Wall or Pedestal
- RFID & Credit Card
   Reader
- OCPP
- 7" Color LCD Screen

### **EvoCharge**

- TAA Compliant
- 32A
- Single or Dual
- Wall or Pedestal
- Modern Design
- Optional Cable

  Management
- OCPP
- CaaS Options

#### <u>PowerCharge</u>

- TAA Compliant
- 32A, 40A, 48A, 80A
- Single or Dual
- Wall or Pedestal
- Integrated Cable Management
- OCPP
- CaaS Options



# DCFC (CLIN 0003)



### **BTC POWER**









#### ABB

- 22.5kW, 50 kW, 94kW, 124kW, 150kW
- CCS-1 /CHAdeMO
- Cabinet & Dispensers
- LED Display
- Integrated Cable Management
- OCPP

#### **BTC Power**

- Assembled in USA
- Fast: 50kW, 100kW, 200kW, 350kW
- CCS-1/CHAdeMo
- Cabinet & Dispensers
- Liquid Cooling
- OCPP
- LCD Screen

#### **FREEWIRE**

- Made in USA
- Fast: 150kW
- Battery Integrated EV Charging
- Infrastructure-Light
- Dual Connectors
- Easy to relocate
- OCPP
- 24" Touchscreen

#### TRITIUM RTM

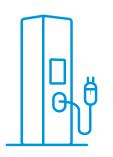
- Made in USA (Q4)
- Fast: 50-75kW
- Liquid Cooling
- Small Footprint
- Modular Design
- IP65 Rated enclosure
- LCD screen
- OCPP



# Management Software and Network Plans (CLIN 0008)

# evconnect

Modern EV Charging Management



Turnkey certified charging stations



Software platform with reliable uptime



Insights and usage data at your fingertips



Trusted driver app and experience



24/7 customer support



### **Network Plans**

### evconnect OPERATE



- ✓ Station access control
- √ iOS/ Android mobile app for drivers
- ✓ 24/7 driver support via the app and phone
- ✓ Live station status view on PlugShare
- ✓ OCPP: Open & Flexible Standards Protocol
- ✓ COPI: Roaming between Network Providers
- ✓ Fee Collection: Price Controls
- ✓ Dashboard view of station activity
- ✓ Station health reports
- ✓ Station use, performance and sustainability reports
- ✓ Driver transaction reports
- ✓ In-dashboard trouble ticket management

### evconnect OPTIMIZE



### (Technology and Consultation)

- ✓ EV Connect platform (with advanced features)
- ✓ Guidance and consultation from a dedicated Customer Success Manager
- ✓ Active network management and elevated response
- ✓ Code of Conduct development
- Access control by organizational hierarchy
- ✓ Pricing policy development and consultation
- ✓ Technical phone support
- ✓ Price benchmarking reports
- ✓ Load balancing
- ✓ Custom quarterly reports tracking charging KPIs
- ✓ Quarterly review with your Client Success Manager



# Warranty Plans (CLIN 0009)

### evconnect

#### **EV Connect Shield**

EV Connect Shield is a comprehensive parts and labor warranty plan that covers every operational and maintenance aspect of the EV charging station — guaranteeing maximum performance and uptime.



### **Charging Stations Covered**











- ✓ Hardware Parts Coverage
- ✓ On Site Repairs in 48-72 Hours
- Automated Alerts to EV Connect Support
- ✓ Certified On-Site Labor Coverage and Dispatch
- ✓ Remote Troubleshooting and Support
- ✓ Routine Network and Firmware Updates
- ✓ Real Time Performance Management
- ✓ Remote Proactive Monitoring
- ✓ Station Replacement if Needed
- ✓ 3yr or 5yr plans



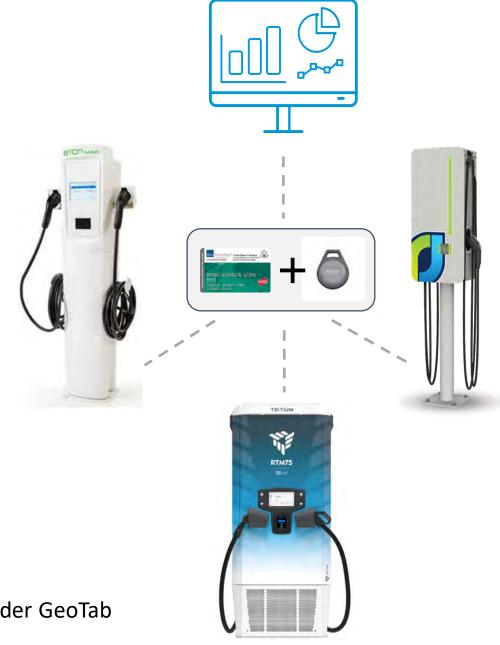
### **OCPP** and **OCPI**



OCPP Open Charge Point
Protocol is an open-source
communication protocol for
networked electric vehicle
chargers. OCPP is the shared
language spoken between
open EV chargers and
charging station management
systems. The vision of OCPP
is to make any EV Charger
work with any charger
management software.



OCPI stands for Open Charge Point Interface. OCPI allows for automated roaming between various EV charging networks. End-users can use EV chargers managed by one operator even if they are using an app built by a different operator or e-Mobility Service Provider (EMSP)





\*EV Connect Platform can also ingest data from GSA Telematics provider GeoTab

## CaaS (CLIN 0002)

**CaaS: Charging as a Service** Comprehensive, turnkey solution that provides equipment, installation, software, maintenance, and driver support under a predictable monthly payment.

#### The Key Benefits of EV CaaS



Lower Upfront Costs Reduce initial capital outlay and pay a monthly fee to access EV Charging infrastructure.



Predictable Expense Operational and maintenance services bundled and delivered as a monthly subscription fee, limiting additional out of pocket expenses.



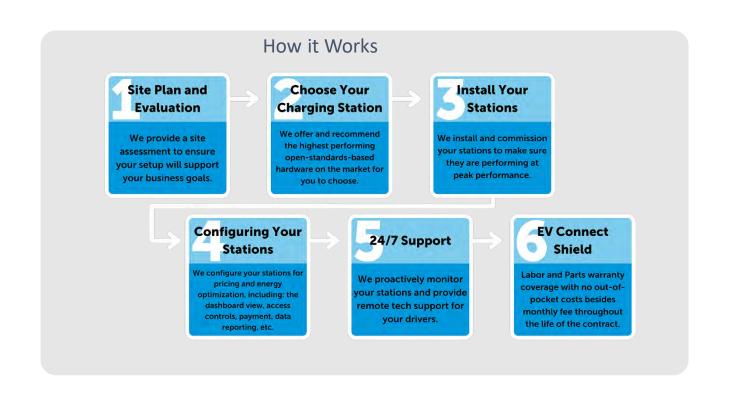
Flexible Scalable to adjust to your charging needs.



Low Risk Reduce unnecessary costs and overhead while EV Connect takes care of station monitoring, network operations, and driver support.



Technology Upgrade Stations will never go obsolete as you can upgrade stations after each contract term.





# Site Planning and EVSE Ancillary Services (CLIN 0006)

TechFlow helps customers leverage advances in energy technology by integrating best-of-breed innovations in energy systems and platforms to drive performance and effectiveness. With deep expertise in cybersecurity, TechFlow recognizes that energy and mobility solutions must be secure from outside or insider attack. We bake this protection into our solutions from the beginning.



#### Site Planning

Travel to site to identify/determine installation location; electrical service requirements and availability; specific site requirements (communications, security, billing, use case, unique specifications); requirements of approval authorities; electrical utility tariff cost analysis; safety analysis; traffic analysis; design basis development.

# Planning & Inspection

Engaging all Authorities Having Jurisdiction (AHJ) to identify applicable permits, inspections, and submittal processes required to achieve approval. Prepare and submit all necessary permit application documentation.

Coordinate all necessary inspections and address any findings.

# Utility Coordination

Coordinate with local electrical utility to: identify requirements, prepare and submit approval packages; review and address feedback; schedule/coordinate field work; identify appropriate tariffs for cost analysis.

#### **Electrical**

Develop conceptual, preliminary, and final design drawings necessary to gain approvals from local electrical utility, AHJs, and site representatives.

Install and/or modify electrical services as needed based upon approved electrical plans

# Site Preparation and Activation

Extend conduits and conductors between electrical panel and EVSEs. Prepare concrete pads and bollards for EVSE installation.

Terminate conductors at electrical panel and EVSE. Commission all installed equipment.

Install anchors and mount EVSE to concrete pad.

### Basic Installation

Set charger, terminate EVSE and upstream conductors. Commission EVSE.



### Best-In-Class Value

Experienced, Dedicated, and Responsive EVSE Specialists assigned to support your account.

Customized solutions based on your agency's unique needs.

Meeting and Exceeding the FY22 (SDB) Small Disadvantaged Business goal of 11%, as set forth in OMB Memorandum M-22-03

- District Fleet is currently the ONLY SDB with an awarded GSA EVSE BPA contract
- HUBZone Certified







# **Contact District Fleet Today!**

Dan MacDonald President dan@districtfleet.com (202)257-3797

www.districtfleet.com







# Electric Vehicle Charging Stations

BPA 47QMCA22A0012

#### Pacific Lighting Mgt Inc (PLEMCo)

d.b.a. Pacific Lighting & Energy Management Company Established 2003

Address: 1638-B E. Edinger Ave Santa Ana CA 92705

Tel.: 714 972 1982

info@plem.co

HUBZone and SB CAGE: 41FR7 UEI: J5ELCCSDMEE4

**GSA MAS: GS-07F-0167X** 



NAICS Codes: 238210, 561210, 335110, 236220, 238150, 221114, 237130, 335122, 423330, 421610

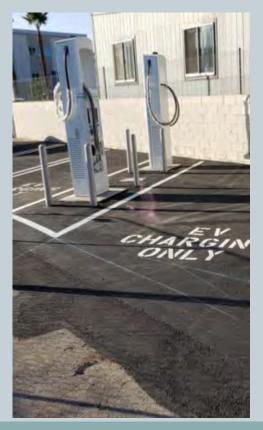


- First US Government contract in March 2011.
- One-stop shop for EVSE since 2012: consulting, design, parts & Installations
- First ever to offer EVC on GSA-Advantage.
- One of only TWO EV-charging BPA awardees in 2016.
- BPA contracts with State of CA since 2014. Numerous complex installations in State & County facilities, e.g. Hospitals, Prison, Public transit.
- Distributor for strategically selected manufacturers to cover the uncertain future of this technology.
- Manufacture & Sale of PLEMCo's own brand of pedestals for EVC
- mounting.



# Electric Vehicle Charging Equipment

• Installed ~200 smart-chargers under the *Electrify America* Program 2018-19 in 30 public locations.













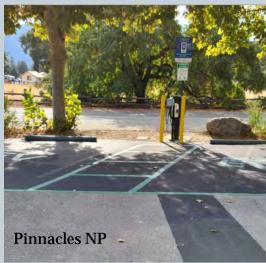
# Electric Vehicle Charging Equipment

• Designed, provided and installed smart-chargers in 8 locations in four National Parks (2019-20).

Sole Source Contract 140P2120C0002.













# Level 1 Electric Vehicle Chargers (Households)

- •Level 1 charging is the use of a standard AC 120 Volt household outlet (\$400-\$600).
- •Electric vehicles come with equipment that allow the driver to plug their car into a standard outlet.
- •This is the cheapest charging method, also the slowest.
- •The average American drives <30 miles/day and all-electric cars have 50-100 miles, most drivers only require Level 1 charging overnight.
- •Level 1 charging will provide ~5 miles of range per charging-hour. A Nissan Leaf @30% depletion will be back to full charge after 7 hours —overnight or while at work.



# Level 2 Electric Vehicle Chargers (Businesses & Residences)

- •Level 2 chargers like the uses a 240 Volt AC outlet, and faster than Level 1 (\$600-2500/port).
- Charging stations often located in public places, mall parking, or workplaces.
- •Level 2 charging speeds vary and depend upon the maximum power rating of the charging station as well as the maximum power rating of the vehicle's on-board charging electronics.
- •Level 2 charging is  $\sim$ 4x faster than level-1:  $\sim$ 2 hours/30 miles (@7kW)
- •Input powers range in 6.5-19.2 kW



# Level 3 Electric Vehicle Chargers (Commercial)

- •Level 3 charging is the fastest type of charging available (\$28k-40k).
- •Also called DC-Fast-Charging.
- •Bypasses EV on-board chargers to charge the battery directly.
- •DC Fast Chargers provide-charge 3-8 times Level-2:
  - A typical 50kW unit provides ~70 mile range in 30 minutes.
- •DC charging stations are used for EVs as well as large vehicles like electric buses.
- •Input powers range in **25-350kW** depending on the model.

### Brands on the BPA

### Clipper Creek (now Enphase)

• Highest quality US-made, Basic Charging Stations on the market. Offers *European Options*.

#### SemaConnect

- Full line of Smart level-2 Chargers and Network service.
- Second largest manufacturer in the US.

### EV-Loop

- Full line of Smart level-2 Chargers and Network service.
- Fast-rising start-up (2019), with very competitive pricing.

#### Tritium

O DC Fast Chargers (50kW and 75kW) (uses EVLoop network)

### EVSE LLC

Line of specialty Smart level-2 Chargers (uses EV-Connect network)

#### EV-Connect

• Premier OCPP networking service for all smart chargers.

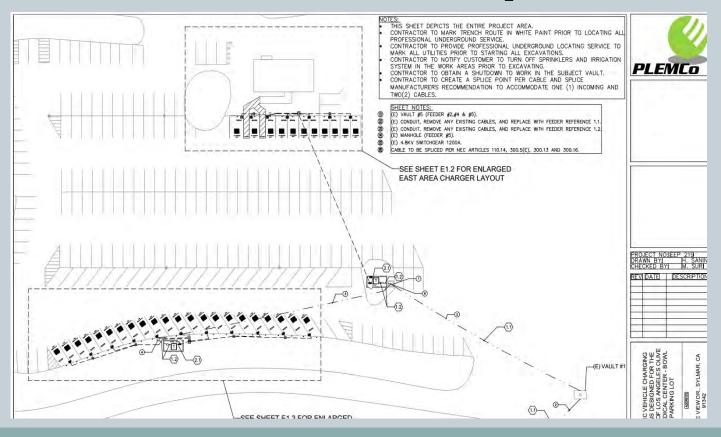
### Site-Planning & Design Services

### PLEMCo is a <u>self-performing</u> licensed electrical contractor since 2004

- Essentially all components need from site-assessment to commissioning is included in our BPA catalog.
- At \$174.59 we offer the lowest Site-assessment price among all offerors. All we typically need is a person who has access to site electrical facilities and a portable device connected to the internet such as a "smart" phone for 30-minutes or less. The deliverable will be a firm-fixed-price proposal for design, parts and installation.
- PLEMCo provides consultation on complex RFPs an agency intends to write, including additional components such as micro-grids, energy storage and PV.

### Site-Planning & Design Services

• PLEMCo expects to receive the complimentary BPA for design/install from the GSA/PBS in September.



# Our Pricing: Level-1

Organization	UFACTURER N	PRODUCT NAME	PRODUCT DESCRIPTION	BPA Price Offered			
Name <	▼	▼	▼	▼			
BEAM GLOBAL	Beam Global	EV ARC 2020 with Neighborhood	The EV ARC 2020 generates power with a 4.3kW array and is the most				
		Electric Vehicle (NEV) 120V	powerful model we have ever released. Equipped with our patented	\$59.043.04			
		Charger with 3 standard 120V	BeamTrak solar tracking system. Included in the base unit price is a 12-	\$55,045.04			
		outlets (NEMA 5-20R)	month Operation & Maintenance Plan with wireless remote monitoring. Sun				
BEAM GLOBAL	Beam Global	EV ARC 2020 with 3 (three) Enel	The EV ARC 2020 generates power with a 4.3kW array and is the most				
		JuiceBox EV Chargers	powerful model we have ever released. Equipped with our patented	\$63,312.98			
			BeamTrak solar tracking system. Included in the base unit price is a 12-	\$65,512.96			
			month Operation & Maintenance Plan with wireless remote monitoring.				
BEAM GLOBAL	Beam Global	EV ARC 2020 with 4 (four) Enel	The EV ARC 2020 generates power with a 4.3kW array and is the most				
		JuiceBox EV Chargers	powerful model we have ever released. Equipped with our patented	\$65,061.82			
			BeamTrak solar tracking system. Included in the base unit price is a 12-	Ψ03,001.02			
			month Operation & Maintenance Plan with wireless remote monitoring				
GLOBAL ENTE	Livingston Ene	Portable EV Charging Station	Portable EV Charging Station - 2.5 kW output, Level 1 Charger, Input				
			Current 20A, 10-20ft Charging Cord, 99% Efficiency, Mobile App	\$5,906.94			
			Authentication, Single output port, Optional Network Charger, SAEJ1772	ψ3,300.34			
			Vehicle Connector, OCPP Compliant, 5Yr Warranty.				
VERDEK, LLC	AeroVironment	TURBODX 32A 25FT SINGLE	Single Port TurboDock Level 2 station indoor / outdoor rated, 20A, includes	\$1,596.19			
			Wall Mount bracket / 3 Yr Warranty	\$1,550.15			
VERDEK, LLC	AeroVironment	TURBODX 32A 25FT DUAL PED	Dual Port TurboDock Level 2 station indoor / outdoor rated, 20A, includes	\$2,752.37			
			Wall Mount bracket / 3 Yr Warranty	\$2,152.51			
VERDEK, LLC	AeroVironment	TURBODX 32A 25FT QUAD PED	Dual Port TurboDock Level 2 station indoor / outdoor rated, 20A, includes	£0.7£0.27			
			Pedestal Mount bracket / 3 Yr Warranty	\$2,752.37			
PLEMCO	Clipper Creek	ACS-20, 16A LEVEL 1 EVSE	12L X 5W (IN), ClipperCreeks ACS-20 provides a low power charging option				
5 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6			perfect for your long term charging needs. This hardwired 120V unit				
5 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6			eliminates the need for a GFCI outlet providing a more reliable charge. Ideal	\$449.78			
			for long term airport charging, employee parking and residential use. Works				
PLEMCO	Clinner Creek	ACS-25, 20A LEVEL 1 EVSE	23L X 12W (IN), ClipperCreeks ACS-25 provides a low power charging option				
LEIVICO	Clipper Creek	700-23, 207 LEVEL 1 EVSL	(20 Amp), perfect for your long term charging needs. This hardwired 120V				
			unit eliminates the need for a GFCl outlet providing a more reliable charge.	\$500.92			
			Ideal for long term airport charging, employee parking and residential use				
			lineal for long term althort charding, employee parking and residential lise				

## Our Pricing: Level-2 (non networked)

Organization Name		PRODUCT NAME	PRODUCT DESCRIPTION	BPA Price	
ABM FACILITY	R NAME EvoCharge	EVSE (Non-	EVSE, Single Port 8 ft Pedestal with Retractor, 25 ft cable	Offered \$2,288.9	
			EVSE, Dual Port 8 ft Pedestal with Retractors, 25 ft cable	\$3,526.1	
		\ \			
	•	EVSE (Non-	EVSE, Single Port Wall with Retractor, 25 ft cable	\$1,236.0	
ABM FACILITY	•	EVSE (Non-	EVSE, Single Port Wall, 25 ft cable	\$604.3	
ABM FACILITY	9	EVSE (Non-	EVSE, Single Port 6 ft Pedestal with 22 ft EVOREEL	\$2,710.1	
ABM FACILITY		EVSE (Non-	EVSE, Dual Port 6 ft Pedestal with 22 ft EVOREEL	\$4,526.36 \$1.815.14	
ABM FACILITY	-	EVSE (Non-	Single Port Wall with 22 ft EVOREEL		
ABM FACILITY	EvoCharge		EVSE, Single Port Wall with 30 ft EVOREEL	\$1,920.43	
EATON	Eaton		EV Dual Port Pedestal (Need to also order 2xGMEV32BR-WC)	\$982.4	
EATON	Eaton	Eaton Green Motion	EV Single Port Pedestal (Need to also order 1xGMEV32BR-WC)	\$898.3	
PACIFIC LIGHTING MANAGEMENT, INC	Clipper Creek	HCS-40, 32A LEVEL 2 EVSE (25ft cable)	23L X 20W (IN), The HCS-40 is a high-quality, high-power, low-price EVSE, built and tested to automaker standards to ensure a reliable charge every time. The HCS-40 takes the wear-and-tear of everyday use in all environments. Its tough NEMA 4 outdoor rated enclosureensures you can install this unit anywhere with confidence. Works with all plug-in vehicles in North America. For more information see: https://store.clippercreek.com/level2/level2-20-to-32/hcs-40-hcs-40p-ev-	\$603.40	
PACIFIC LIGHTING MANAGEMENT, INC	Clipper Creek	HCS-40R, 32A LEVEL 2 EVSE	23L X 20W (IN), The Ruggedized HCS-40R features a rubber overmolded SAE J1772 connector, a field-replaceable latch, and a five year warranty. The HCS-40R is an affordable solution designed for fleet, parking lot and extreme weather conditions. Works with a II plug-invehicles in North America. For more information see: https://store.clippercreek.com/level2/level2-20-to-32/hcs-40-ruggedized	\$710.2	
PACIFIC LIGHTING MANAGEMENT, INC	Clipper Creek	HCS-40 EVSE BUNDLE	46L X 40W (IN), ClipperCreek Share2 enabled HCS-40 bundle. Share2 allows charging station owners to install two 32A, Level 2 charging stations on one 40A circuit. The Share2 is an inexpensive solution for any location looking for an easy way to double the number of charge points without running additional 240V circuits. The Share2 enabled HCS-40 will offer full power if one vehicle is requesting a charge and automatically splits the power if a second vehicle requests a charge at the same	\$1,599.9	
PACIFIC LIGHTING MANAGEMENT, INC	Clipper Creek	HCS-50, 40A LEVEL 2 EVSE	23L X 20W (IN),HCS-50 is the latest high quality, high power, low priced charging station from ClipperCreek. Built and tested to automaker standards to ensure a reliable charge every time. The HCS-50 is rated for indoor or outdoor use and comes with a wall mount connector holster. For more information see: https://store.clippercreek.com/level2/level2-40-to-80/hcs-50-hcs-50P-40-amp-ev-charging-station	\$678.23	
PACIFIC LIGHTING MANAGEMENT, INC	Clipper Creek		IL X 20W (IN), The HCS-60 is a 48 Amp electric vehicle charging station, built and tested to automaker standards to ensure a reliable charge every time. Works wit plug-in vehicles including the Chevy Volt, Nissan Leaf, Fiat 500e, BMW i8, Kia Soul, Ford C Max, etc. For more information see: tps://store.clippercreek.com/level2/level2-40-to-80/hcs-60-48-amp-ev-charging-station		
PACIFIC LIGHTING MANAGEMENT, INC	Clipper Creek				
PACIFIC LIGHTING MANAGEMENT, INC	Clipper Creek	2 EVSE	24L X 20W (IN), The CS-100 has the most power output in a UL-Listed Level-2 EVSE offering 19.2 kW for EV charging. The CS-100 works with all J1772 compliant vehicles. Great for vehicles that can accept high power charging, and future proofing installations. A purelycommercial EVSE, modularly designed and set up for easy field service and parts replacement. For more information see: https://store.clippercreek.com/cs-100-70-amp-80-amp-ev-charging-station	\$2,214.1	
PACIFIC LIGHTING MANAGEMENT, INC	Clipper Creek	J1772	24L X 12W (IN), Charging Current: 15A charging, Connector Type: J1772, Power: 230V, 20A dedicated circuit, 25 Feet Cable, Warranty: 3 Years Certifications: ETL EU, CE, Enclosure: NEMA 4; indoor/outdoor rated, fully sealed, 11L x 4W x 3D, Installation: P lug connected, CEE 7/7 Shuko Plug. For more information call PLEMCo.	\$557.7	
PACIFIC LIGHTING MANAGEMENT, INC	Clipper Creek	ECS-20 15A 230V TYPE-2	24L X 12W (IN), Charging Current: 15A charging, Connector Type-2, Power: 230V, 20A dedicated circuit, 25 Feet Cable, Warranty: 3 Years Certifications: ETL EU, CE, Enclosure: NEMA 4; indoor/outdoor rated, fully sealed, 11L x 4W x 3D, Installation: Plug c onnected, CEE 7/7 Shuko Plug. For more information call PLEMCo.	\$807.7	
PACIFIC LIGHTING MANAGEMENT, INC	Clipper Creek	CS40E LEVEL2 230V J1772	36L X 36W (IN), Charging Current: 32A, Connector Type-2 (European) Power: 230V, 40A dedicated circuit, 25 feet Cable, 1 Year Warranty, Certifications: UL, cUL, ETL, cETL. NEMA 4 enclosure; indoor/outdoor rated, fully sealed, Dimensions: 21H x 17W x 8D (mounting holes 16 on center), Installation: Hardwired. For more information call PLEMCo.	\$1,777.9	
PACIFIC LIGHTING MANAGEMENT, INC	Clipper Creek	CS40E LEVEL2 230V TYPE-2	36L X 36W (IN), Charging Current: 32A, Connector Type: J1772 (Lockable), Power: 230V, 40A dedicated circuit, 25 feet Cable, 1 Year Warranty, Certifications: CE, NEMA 4; indoor/outdoor rated, fully sealed, Dimensions: 21H x 17W x 8D (mounting holes 16 o n center), Installation: Hardwired. For more information call PLEMCo.	\$1,879.5	

## Our Pricing: Level-2 (networked/OCPP)

Organization Name	MANUFACTURE	MFR PART NO	PRODUCT DESCRIPTION	BPA Price
_	R NAME 💌	,T	▼	Offered 💌
ABM FACILITY	SemaConnect	SC7-Full1-W	SemaConnect Series 7 Fleet EV Dual Charging Station with wall mounting and one year of Network Service and on-site full replacement warranty coverage (2 Plugs)	\$4,393.45
SUPPORT			Wall mount. Includes LCD, RFID card, and Mobile App.	
LIOCE GROUP INC.,	SemaConnect	SC7-Full1-W-TAA	SemaConnect Series 7 Wall Mount- Fleet EV Dual Charging Station with mounting device and one year of Network Service and Full Replacement Warranty Coverage	\$4,712.64
THE				
PACIFIC LIGHTING	SemaConnect	SC7-FULL1-W	24L X 24W (IN), SemaConnect Series 7 Comprehensive Fleet Mngmt., EV Dual Charging Station (30A at 240V, 7.2kW) LED/LCD monitor, Data Analytics with wall	\$3,924.85
MANAGEMENT, INC			mounting and one year of Network Service and on-site full replacement warranty coverage (2 Plugs) Wall mount. Includes LCD, RFID card, and Mobile App.	

#### Semaconnect *includes* one year of network svc + all-inclusive *on-site* warranty. Additional years can be purchased

Organization Name		MFR PART NO	PRODUCT DESCRIPTION	
▼	R NAME 💌	T,	▼	Offered 💌
ABM FACILITY	SemaConnect	SC7P-Full1- P	maConnect Series 7 Plus (80amp) Fleet Dual EV Charging Station with pedestal mounting and one year of Full Network Service (2 Plugs) and on-site full	
SUPPORT			replacement warranty coverage. Includes LCD, RFID card, and Mobile App.	
ABM FACILITY	SemaConnect	SC7P-Full1- W	SemaConnect Series 7 Plus (80amp) Fleet Dual EV Charging Station with wall mounting and one year of Full Network Service (2 Plugs) Wall Mount and on-site full	\$5,350.63
SUPPORT			replacement warranty coverage. Includes LCD, RFID card, and Mobile App.	
LIOCE GROUP INC.,	SemaConnect	SC7P-Full1-P S-TAA	SemaConnect Series 7 Plus (80amp) Fleet Dual EV Charging Station with mounting device and one year of Full Network Service and Full Replacement Warranty	\$5,739.36
THE			Coverage	
LIOCE GROUP INC.,	SemaConnect	SC7P-FUII1-W-TAA	SemaConnect Series 7 Plus Wall Mount- (80amp) Fleet Dual EV Charging Station with mounting device and one year of Full Network Service and Full Replacement	\$5,739.36
THE			Warranty Coverage	
PACIFIC LIGHTING	SEMACONNEC	SC7P-FULL1- P	24L X 24W (IN), SemaConnect Series 7 Plus (80amp) Fleet Dual EV Charging Station with pedestal mounting and one year of Full Network Service (2 Plugs) and	\$4,779.93
MANAGEMENT, INC	T		on-site full replacement warranty coverage. Includes LCD, RFID card, and Mobile App.	
	SEMACONNEC	SC7P-FULL1- W	24L X 24W (IN), SemaConnect Series 7 Plus (80amp) Fleet Dual EV Charging Station with wall mounting and one year of Full Network Service (2 Plugs) Wall Mount	\$4,779.93
MANAGEMENT, INC	T		and on-site full replacement warranty coverage. Includes LCD, RFID card, and Mobile App.	

#### Loop does not charge network fees to the owner; a calculated fee is added to each charge. Can do that with any OCCP hardware

PACIFIC LIGHTING	LOOP INC	EVS-32A-L2-001	15L X 15W (IN), Level 2 EV charger. Access Control: RFID, or Smartphone (NFC & QR Code). Output: 32 Amp / 7.68 kW max output. Network Connectivity: Built-in	
MANAGEMENT, INC			Wi-Fi (802.11 b/g/n). For LTE Cellular (CAT 1: AT&T or Verizon); additional Gateway package is required forat least one unit per site. Communication: OCPP 1.6	
6-6-7 			Compliant. Certifications: Energy Star Certified, UL, California Title-4 Compliant (gas-pump-style screen), Connector: SAE J1772 Type 1 Standard 25 ft cable. 3-year	\$1,791,45
			limited product warranty (parts only). O&M and extended warranty plans are available. Additional recurring networking services are required. Loop provides	
			services for a fee that is charged directly to the end-users. However, other OCPP compliant services are also available. For more informmation, see:	
			https://usermanuals.evloop.io/ev-flex_spec-sheet.pdf	
PACIFIC LIGHTING	LOOP INC	EVS-32A-L2-002	15L X 15W (IN), Level 2 EV charger. Access Control: Smartphone (QR Code). Output: 32 Amp / 7.68 kW max output. Network Connectivity: Built-in Wi-Fi (802.11	
MANAGEMENT, INC			b/g/n). Communication: OCPP 1.6 Compliant. Certifications: UL, California Title-4 Compliant (gas-pump-style screen), Connector: SAE J1772 Type 1 Standard 25 ft	
6-6-7 			cable. For added RFID or cellular connection features, consider the EVFLEX model. 3-year limited product warranty (parts only). O&M and extended warranty plans	\$1,128.50
6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 -			are available. Additional recurring networking services are required. Loop provides such services for a fee that is passed to the end-users. However, other OCPP	
			compliant services are also available.	

# Our Pricing: Level-3 (OCPP)

Shown (out of 174 offers): All Single Port with CCS+Chademo offerings on the 2022 BPA

Name -	NAME	▼ ▼	▼	▼	Offered <
CARAHSOFT TECHNOLOG	3	CPAAS-CPE250-3	ChargePoint as a Service	3year Subscription, ChargePoint Express 250 Station (62.5 kW) - includes Express 250 Station, 2x Power Modules, 1x CCS1 200A cable, North	\$36,204.21
CARAHSOFT TECHNOLOG	_	CPAAS-CPE250-5		5year Subscription, ChargePoint Express 250 Station (62.5 kW) - includes Express 250 Station, 2x Power Modules, 1x CCS1 200A cable, North	\$54,593.65
CARAHSOFT TECHNOLOG	_	CPAAS-CPE250-PAIRED-3		3year Subscription, ChargePoint Express 250 Station (62.5 kW) - includes 2x Express 250 Station, 4x Power Modules, 2x CCS1 200A cable, North	\$72,408.42
CARAHSOFT TECHNOLOG	3	CPAAS-CPE250-PAIRED-5		5year Subscription, ChargePoint Express 250 Station (62.5 kW) - includes 2x Express 250 Station, 4x Power Modules, 2x CCS1 200A cable, North	\$109,187.30
PACIFIC LIGHTING MANAGEME	EV-Loop/Tritium	EVS-VEEFIL-RTM50	CHARGER	CHAdeMO and CCS. Access Control: RFID & Loop App; Open ADR2.0 and OCPP 1.5/1.6J Compliant; Certified: Energy Star & CAL eVIP Compliant; Power: 380/480 VAC, three phase input, 50kW max output,	\$33,054.71
PACIFIC LIGHTING MANAGEME	EV-Loop/Tritium	EVS-VEEFIL-RTM75	CHARGER	CHAdeMO and CCS. Access Control: RFID & Loop App; Open ADR2.0 and OCPP 1.5/1.6J Compliant; Certified: Energy Star & CAL eVIP Compliant; Power: 380/480 VAC, three phase input, 75kW max output,	\$39,724.07

### **Network Service Providers**

### EV-Connect

• Premier OCPP networking service for all smart chargers.

### SemaConnect

- Works with any OCPP compliant hardware
- Low cost

### EV-Loop

- Works with any OCPP compliant hardware
- Cost passed on to driver

### Accessories

### Cost-Effective Mounting Pedestals

 PLEMCo manufactures its own pedestals at very low relative pricing.











\$740.30 Single \$1125.57 Dual

\$348.19

**Supgrade** 

### Fleet Charging: Basic Chargers + Your Own Monitoring

#### AcuRev 2000

#### Multi-Circuits Networked Multifunction Power and Energy Meter

- · IEC and ANSI Revenue Grade Accuracy Measurement Standard
- · Comply to IEC 62053-22 Measurement Standard
- · Support up to 18 Individual Channels for Energy Measurement
- · Advanced Power Quality Analysis for each Circuits
- Onboard Datalogging Enables Historical Trending Analysis
- · Multiple communication ports and protocols for local and remote monitoring
- External and Built-in CT options provides perfect solution to Retrofit and New projects
- Extented Power Supply (100 415 Vac)
- Data (Pulse) Collection from Water and Gas Meter
- Built-In Serial, Ethernet and WiFi Communication
- · Modbus, HTTPs Webserver, HTTPs and FTP Data Post
- Free Cloud metering data storage

Basic Chargers *do not* require IT security certification (FedRamp/NIST). You can order basic chargers NOW!





#### **Overall** Score:94%

#### **Open** Ratings



#### Dun & Bradstreet

Past Performance Evaluation Date: 05/04/09

D-U-N-S Number for this company: 19-081-5519

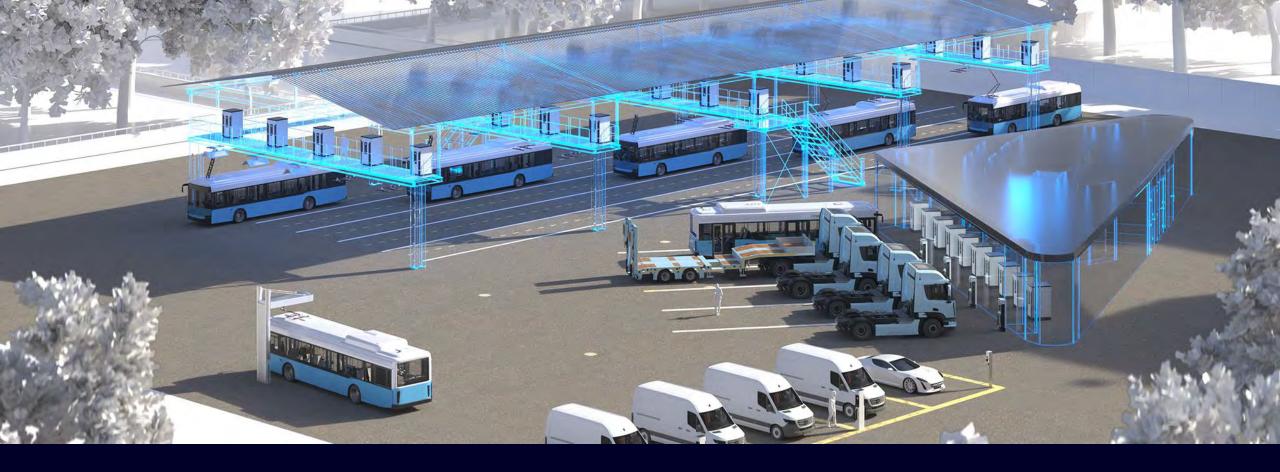
#### 2. SUPPLIER PERFORMANCE RATINGS

Open Ratings calculates supplier performance scores using a sophisticated algorithm that takes into account the amount of information available on a supplier, the recency of the information, and the accuracy of the raters. Ratings range from 0 to 100,

The state of the s	
Overall Performance Rating Indicative of likely overall performance	SIC Level Quintile  Bottom Top  SIC: 1731/Electrical Work

Detailed Performance Ratings		0	25	50	75	100
RELIABILITY:						
How reliably do you think this company follows through on its commitments?	94					
COST:						
How closely did your final total costs correspond to your expectations at the peginning of the transaction?	96					
ORDER ACCURACY: How well do you think the product/service delivered metched your order specifications and quantity?	96					
DELIVERY/TIMELINESS: How satisfied do you feel about the timeliness of the product/service delivery?	95					
QUALITY: How satisfied do you feel about the quality of the product/service provided by this company?	95					
BUSINESS RELATIONS: How easy do you think this company is to do business with?	95					
PERSONNEL:						
How satisfied do you feel about the attitude, courtesy, and professionalism of this company's staff?	94					
CUSTOMER SUPPORT: How satisfied do you feel about the customer support you received from this company?	92					
RESPONSIVENESS:						
How responsive do you think this company was to information requests, issues, or problems that arose in the course of the transaction?	93					

Top Quintile



# Siemens eMobility

Electric Vehicle Charger Training

Jim Plourde
Federal Business Director
Siemens SI
<u>Jim.Plourde@Siemens.com</u>
603.265.6556



# Siemens PlugtoGrid™

Supply of open end-to-end solutions for any EV application



#### **Design & build**

- Large LD infrastructure deployment
- MD/HD depot
- Microgrid
- Greenfield/Brownfield projects
- Infrastructure expansions
- 3rd party chargers

#### **EV** chargers

- DC heavy-duty plug in (SICHARGE UC)
- High powered pantographs
- AC level 2 (VersiCharge)
- DCFC level 3 (Ultra)

## Make-ready equipment

- Power distribution equipment
- Simplifying installations with one vender

### Digital services

- Charger management/billing
- Building management systems
- Load management
- Scheduled charging
- Energy optimization

#### Asset services

- Onboarding
- Project Financing
- O&M management
- Maintenance and service contracts
- Warranty



### Siemens eMobility Product Offering

A comprehensive EV charger offering

AC Chargers "Level 2"



#### VersiCharge

Home, Workplace, Parking areas, longerterm charging locations

- \* 9.6kW & 11.5kW
- Cell, Wi-Fi,
   OCPP, I/O, RFID /
   QR Code

DC Fast Charger
"Level 3"



#### Ultra50 / Ultra175

Short term charging locations

- 50kW / 175kW
- Cell, RFID.
- · Credit Card.
- OCPP coms
- 30 min to charge

DC Heavy-duty
Plug-In
Charger



# SICHARGE UC Plug-In

- Fleet, eBus & Depots
- 150kW,
- 200-950V
- Up to "4" remote dispensers

Overhead Bus Charger



# SICHARGE UC Pantograph

- eBus & Fleet charging
- On-route or Depot charging
- 150kW 450kW

Cloud Service Offerings



#### Care, Charge and Control Cloud Service

- IoT cloud
   Reporting,
   trending, control,
   alarming and billing
- Open connectivity to any OCPP charger



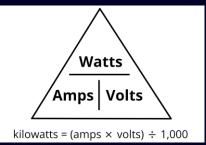
# Electric vehicle charging Basics





# Understanding the basics

**AC** and **DC** charging





- Onboard charging system inside the EV Typical 800 Vdc
- Charging infrastructure has a small footprint and low investment cost
- Charging power rates depend on inverter and electrical supply (9.6 – 11.5 kW)\* 19.2 Kw next year

**Commercial building locations** 

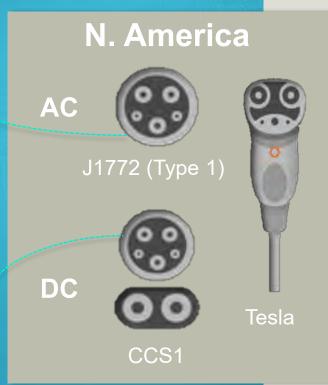
- Inverter in the charging infrastructure
- Lower investment cost in vehicle, larger footprint and investment in charging infrastructure
- Higher charging power rates possible (300+ kW)

Fast charging and heavy-duty vehicles



# Electric Vehicles 101 ... Plug Types





- In North America all vehicle manufacturer (except Tesla) use SAE J1772 connectors
- Tesla provides an adapter to enable use with J1772 connector charging stations
- Every EV sold in North America can use any charging station with J1772 connector.
- The CCS1 connector uses the J1772 charging inlet and adds two more pins below
- Tesla uses the same connector for level 1, level 2 and DC fast charge
- Only Tesla vehicles can use their DC fast chargers, called Superchargers.

# Common "*Re-fuel* Charging" Times of an Average Electric Vehicle



Example based on 75 kWh battery charging from 15% to 80%

# Level 2 AC Chargers VersiCharge TM Commercial / Residential





# VersiCharge AC Series UL Highlights

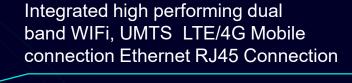
Rugged housing for indoor/outdoor use (NEMA 4)

Integrated revenue accurate ANSI compliant metering (+/- 0.5%)

Status LEDs indicate system power, vehicle connection status, charging power, and fault status

User authentication via RFID (synching via OCPP)

Adjustment dial for current limitation



Status bar for information on identification, charging, and time delay

SIEMENS

Touch-sensitive button for desired time delay and power level

UL listed and tested to J1772 standard to ensure safety and interoperability with all standard EVs



#### **VersiCharge™ AC Level 2 Chargers**

Residential and Commercial Product Offerings



#### **Commercial**

#### **Parent / Child Solutions**





Cell



Parent







20' max

#### Features:

- 9.6 & 11.5kW with 20' charging cord. Wi-Fi / ethernet, cellular OCPP communications.
- Child Unit Wi-Fi, ethernet and can link to parent charger for easy multi-unit installation
- Parent Unit includes Ethernet & Cellular gateway and supports one child connection Wi-Fi chargers in star network
- **Plug:** SAE J1772
- Billing or On/Off control with standard RFID reader. optional QR code or cloud services





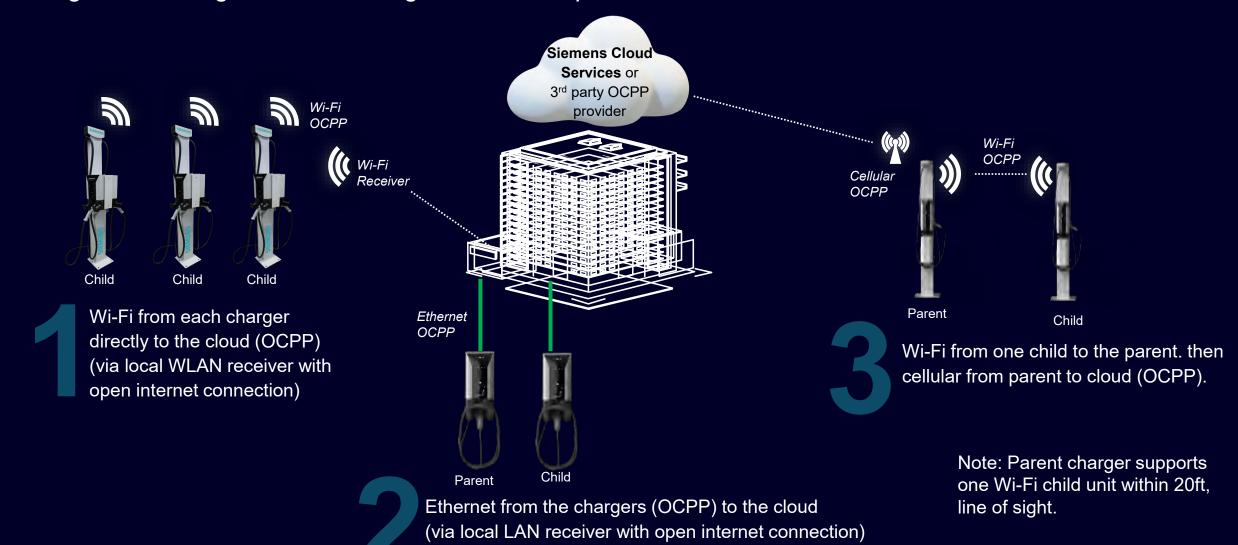
- Buy American compliant to meet IIJA funding
- 5-year warranty
- 25-foot cable
- 48A Commercial





#### **VersiCharge AC Series**

#### Billing / Monitoring Network Configuration Examples





# VersiCharge Ultra™

Mobility Hub, Automotive / Fleet Focused Product Highlights

#### One of the fastest growing charging lines

#### **Features**

- Dual cord design can accommodate one CCS1 plug and one CHAdeMo plug for maximum flexibility (independent charging sessions)
- Communication via 3G/4G wireless or ethernet wired
- Options include built-in credit card reader and RFID capability
- 175 kW model has an external\* module to support the power electronics
- Liquid cooled power electronics
- IP65 Rated Careful and methodical packaging
- 1.6Jason OCPP ----- Open Charge Point Protocol
- 50Kw & 175Kw units are now widely used in North America.
- 480V, 3 phase, 100A breaker for 50Kw and 400A for 175Kw
- AIC ratings vary between the units, please align with power distribution
- External "IPU" is the power Unit, Separate from User Unit







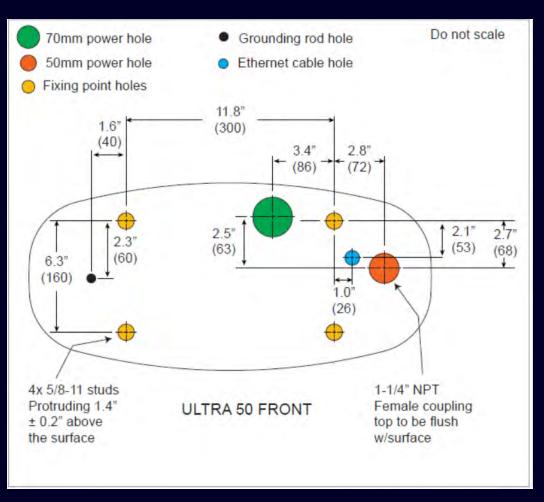
175 kW



# **Ultra 50Kw Installation**





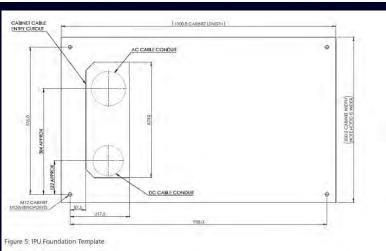


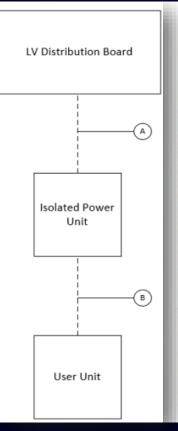
The Ultra 50 has a very small footprint with a simple 100A feeder breaker and no separate User Unit Required

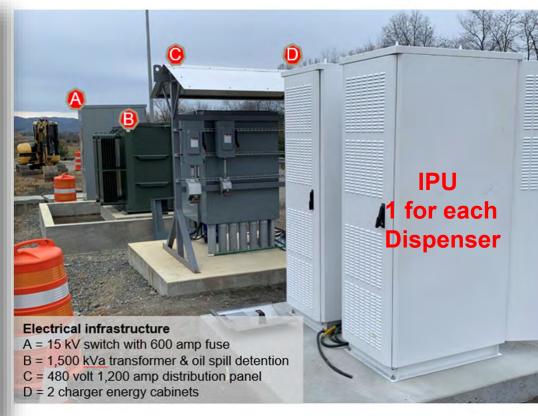


# Ultra 175Kw Example installation





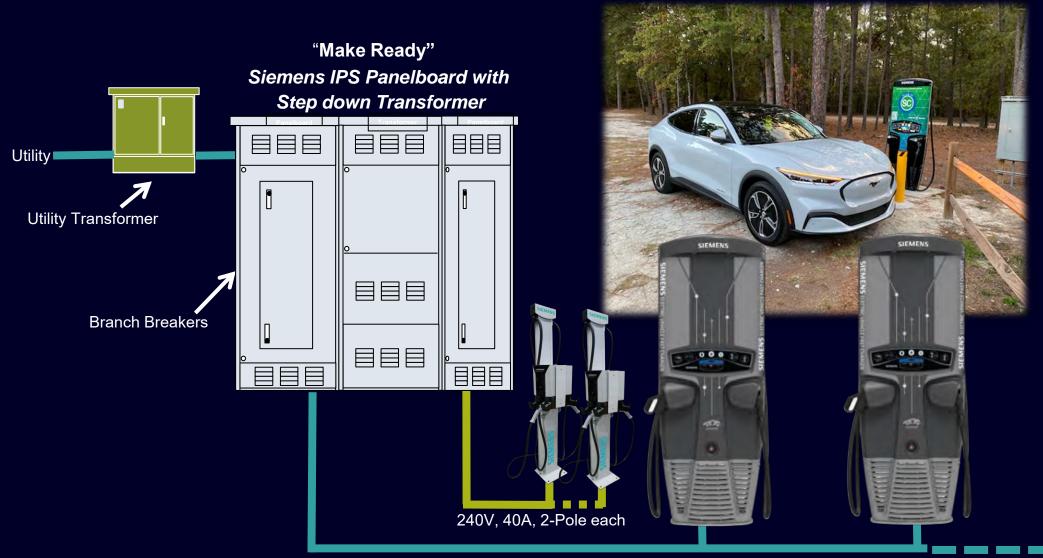






#### Ultra50 ™ DC Fast Charger PlugtoGrid™ Offering

Combined DC / AC Example



#### **Applications:**

- Parking lots
- Rest Stops
- Fleet Depo's
- Chain stores
- And more





## SICHARGE UC™ Modular System

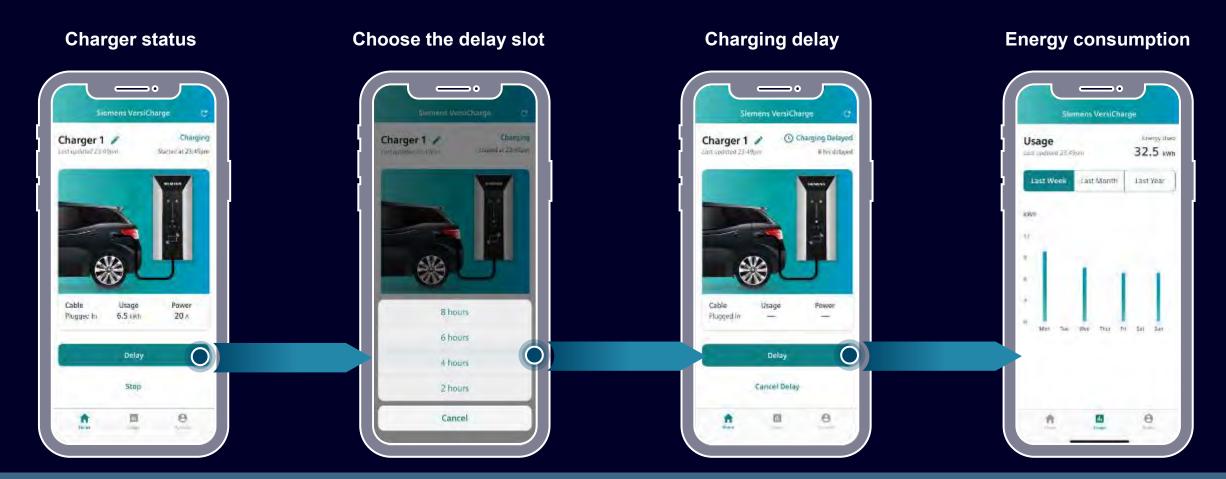
# Fleet Charging Solutions for City / Government and Private Sector

- The SICHARGE UC 150 provides a modular 150kW solution that can be expanded to 450kW.
- Connections can include external dispensers and/or pantograph applications.
- Each SICHARGE UC 150 lineup will support up to four remote dispensors.
- Siemens has high power plug-in and mast pantograph installations all over the world.



#### VersiCharge™ AC Level 2 Charger *FREE* App

For configuration and basic monitoring / control



Mobile app can be used for controlling charging schedule and monitoring your personal charger



# Managing level 2 AC Chargers **VersiCharge** TM cloud-based solution





# eMobility Open Ecosystem Cloud Services

Simple EV packages for maximum flexibility



#### **CHARGE**



#### **CHARGE Package:**

- Monitoring, reports, Billing Services, Pay-to-Charge offering with flexible rates, fixed rates, and more
- Owner Dashboard providing complete network visibility

Driver Charging App

#### **CONTROL**



#### CONTROL Package adds on:

- Dynamic Load Control
- Static Load Control
- Max Load Management

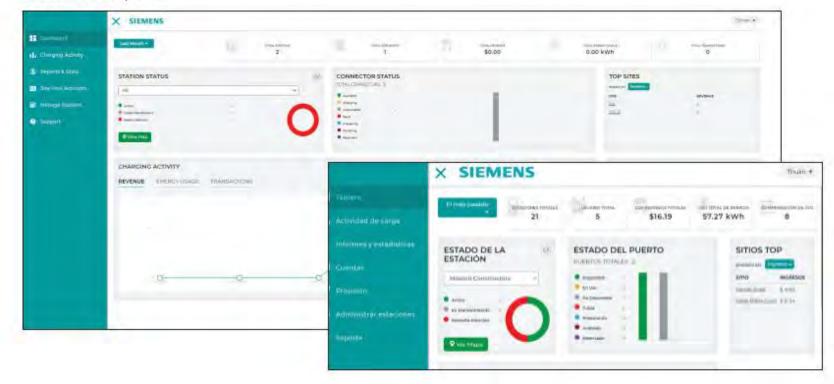


# Cloud SaaS "software as a Service"

#### Owner web portal

View station information, including station availability, Charging statistics, accessibility time and more

EV charger owners can quickly view all their charger's information from one easy to read dashboard. Review the charger's usage over time or in groups, manage stations remotely, setup billing rates by kw, time, special events and more. Dashboard screens are also available in Spanish.







#### olution for your needs



#### Level 3 DC Fast Charging

The VersiCharge Ultra™ from Siemens is a reliable and robust electric vehicle fast charger with an attractive design that is easy to install and operate.

Unrestricted | © Siemens 2022 | eMobility



#### Flexible level 2 AC charging

VersiCharge™, the industry's most flexible and versatile line of electric vehicle charging systems for residential and commercial applications.

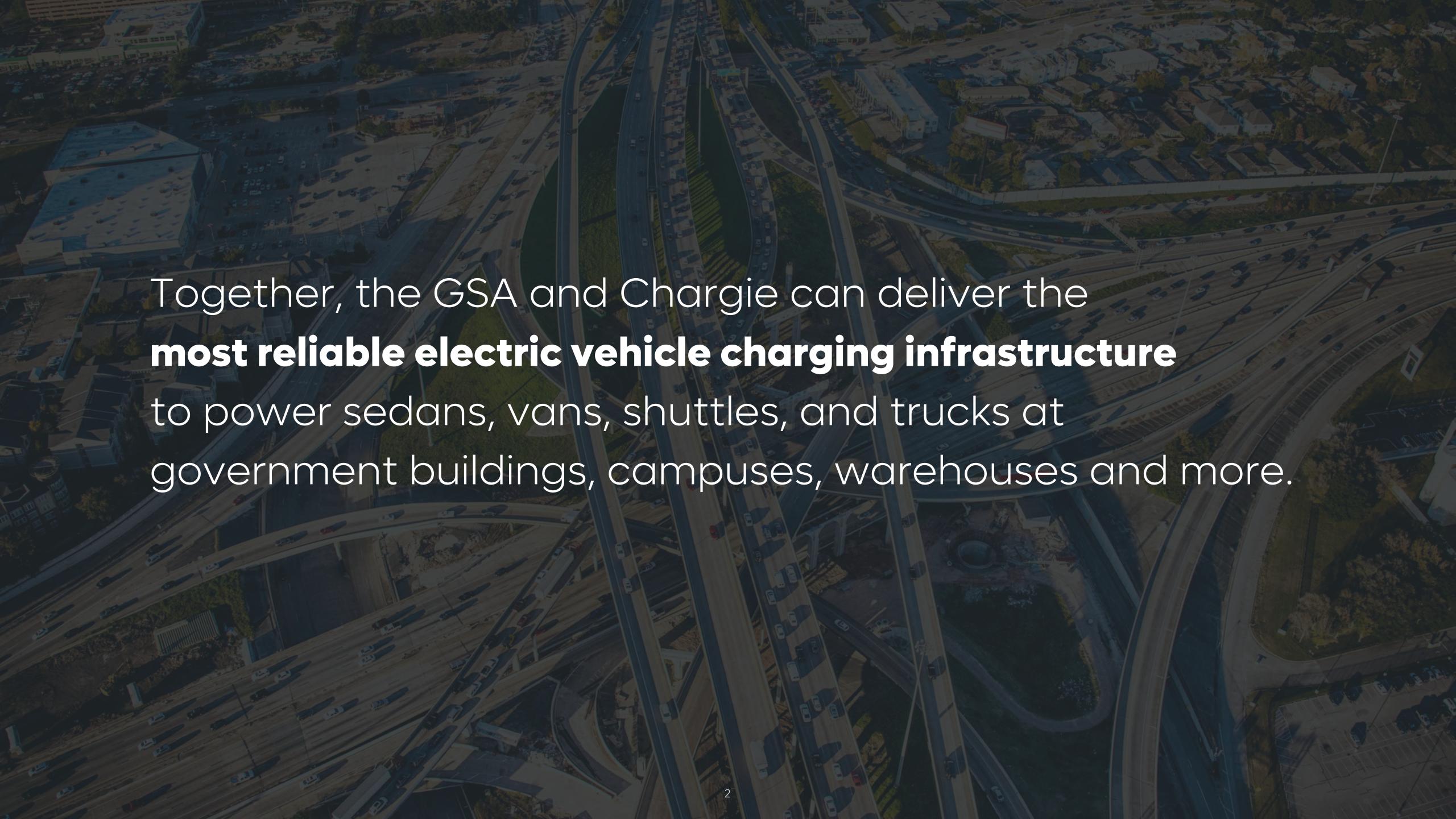
# Online Support - eMobility Web Site

Providing product information, Specifications, Video's, Rebate Info and more

www.USA.siemens.com/emobility



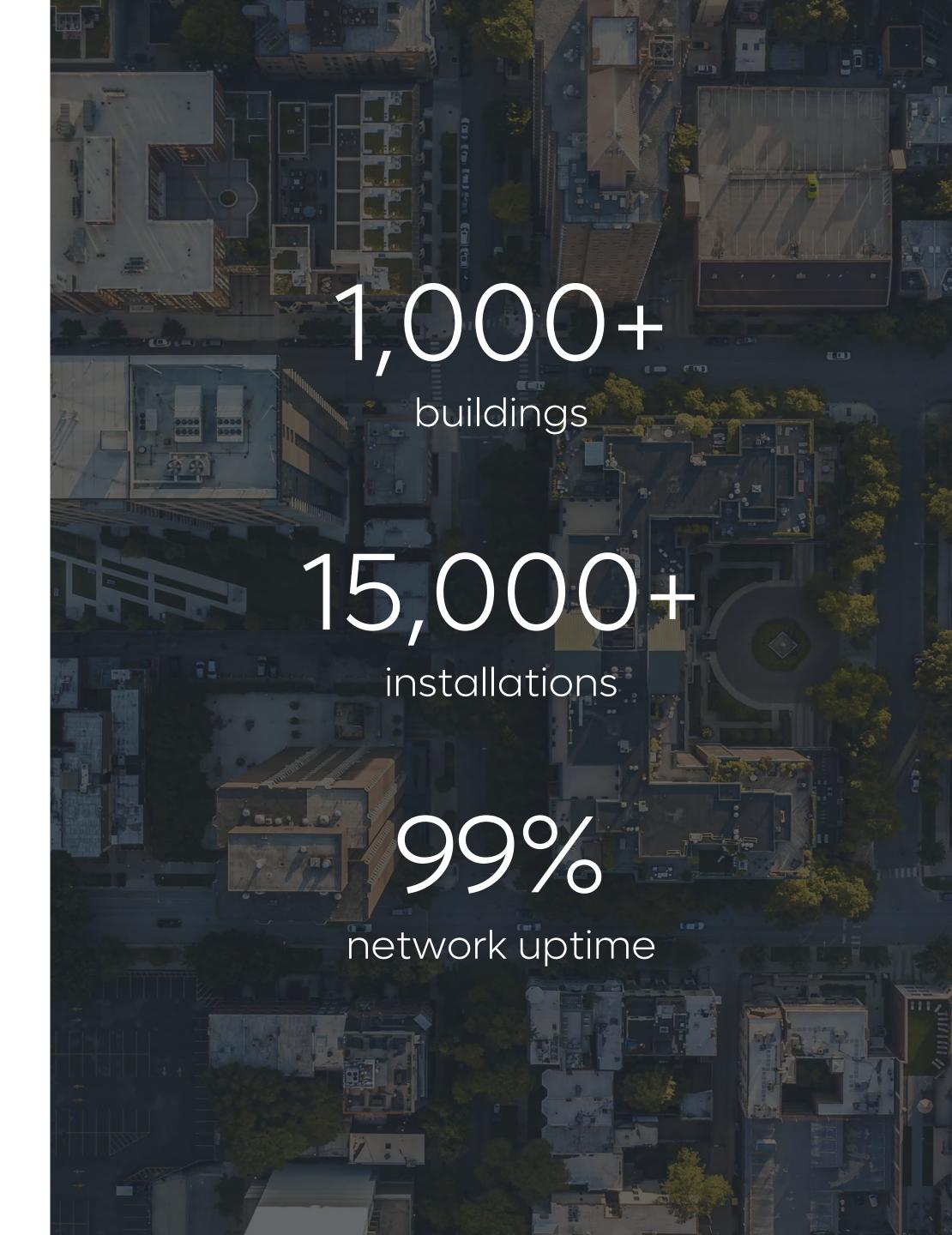




# Meet Chargie

Chargie is an electric vehicle infrastructure company that provides a **reliable, turnkey** solution for installing, managing and operating networked EV charging stations.

Our EV solutions are **pre-approved by utility programs** around the country and our team of clean energy and technology pioneers have decades of experience serving the needs of government venues, including Department of Defense facilities.



# Partner with a truly turnkey provider



1. Survey & Evaluate

We send our team to provide a free site survey and evaluation



2. Plan & Design

Our team of engineers designs and customizes a plan that works best for you



3. Permit & Approve

We work directly with the city and utility companies to get plans approved



4. Install & Validate

Installation can take as little as two weeks; users are ready to charge in no time



5. Manage & Operate

We manage and monitor your network with 24/7 network insights and metrics

# Leverage a customizable and easily scalable approach

Installations are not one size fits all. Our project approach balances existing infrastructure, available power, cost, aesthetics and future requirements. **We plan for your needs today with an eye on growth for tomorrow.** 

Our flexible EV charging solutions are designed for a variety of project types:

- Mid and high volume
- Indoor and outdoor
- Underground and above ground
- Retrofits and new construction



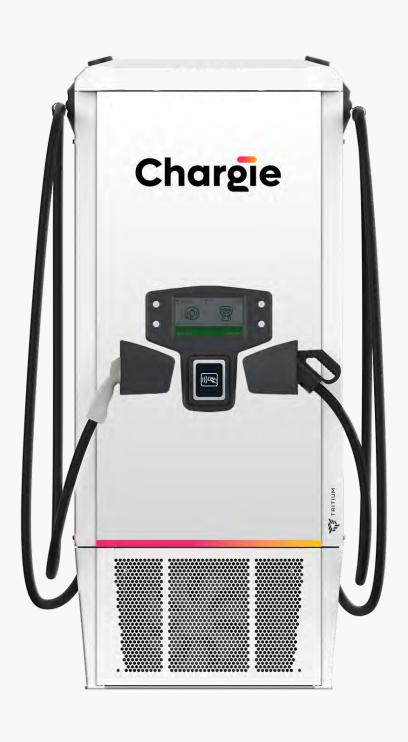
# Pair the right hardware with the right application

Level 2 and Level 3 options provide right-sized solutions for longer dwell time locations and quick-turn needs.



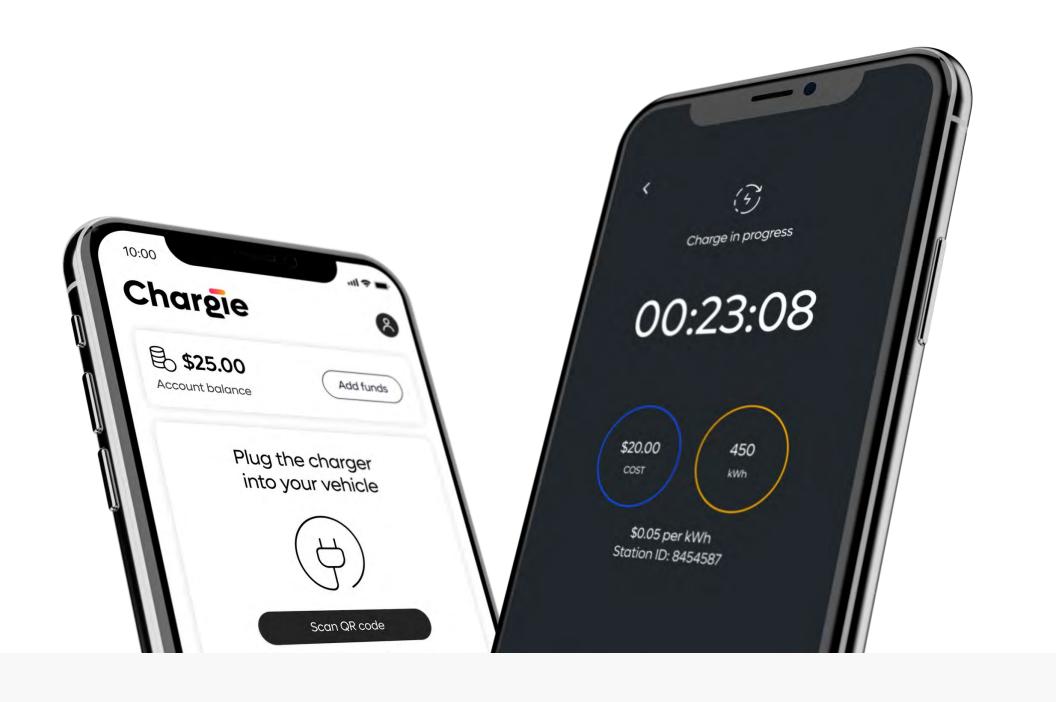
### **Level 2 Charging Stations**

- 32 Amps and 7.68 kW of output power
- Our software employs energy optimization and load management tools
- Wi-Fi & dual cellular connection offer backup connectivity
- RFID compatible
- Allow multiple users or assign parking depending on your needs
- 3-year coverage guaranteed
- Configurable to run any similar OCPPcompliant software



### **Level 3 Fast Charging Stations**

- 76 Amps and 50-150 kW of output power
- Our software employs energy optimization and load management tools
- Allow users to pay via the credit card and mobile pay terminal
- 3-year coverage guaranteed
- Configurable to run any similar OCPP-compliant software

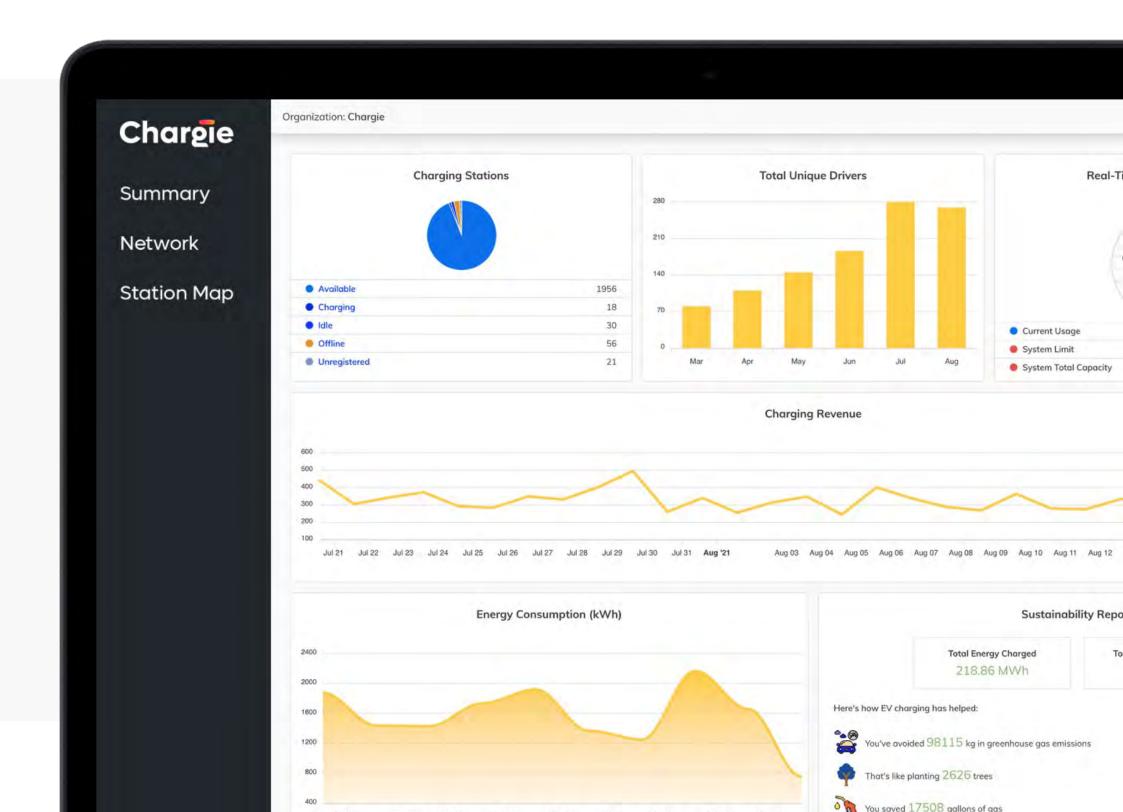


# Make charging easy and seamless with an intuitive mobile app

- Scan to start
- Get live updates
- Manage payment

# Take control with a data-rich management platform

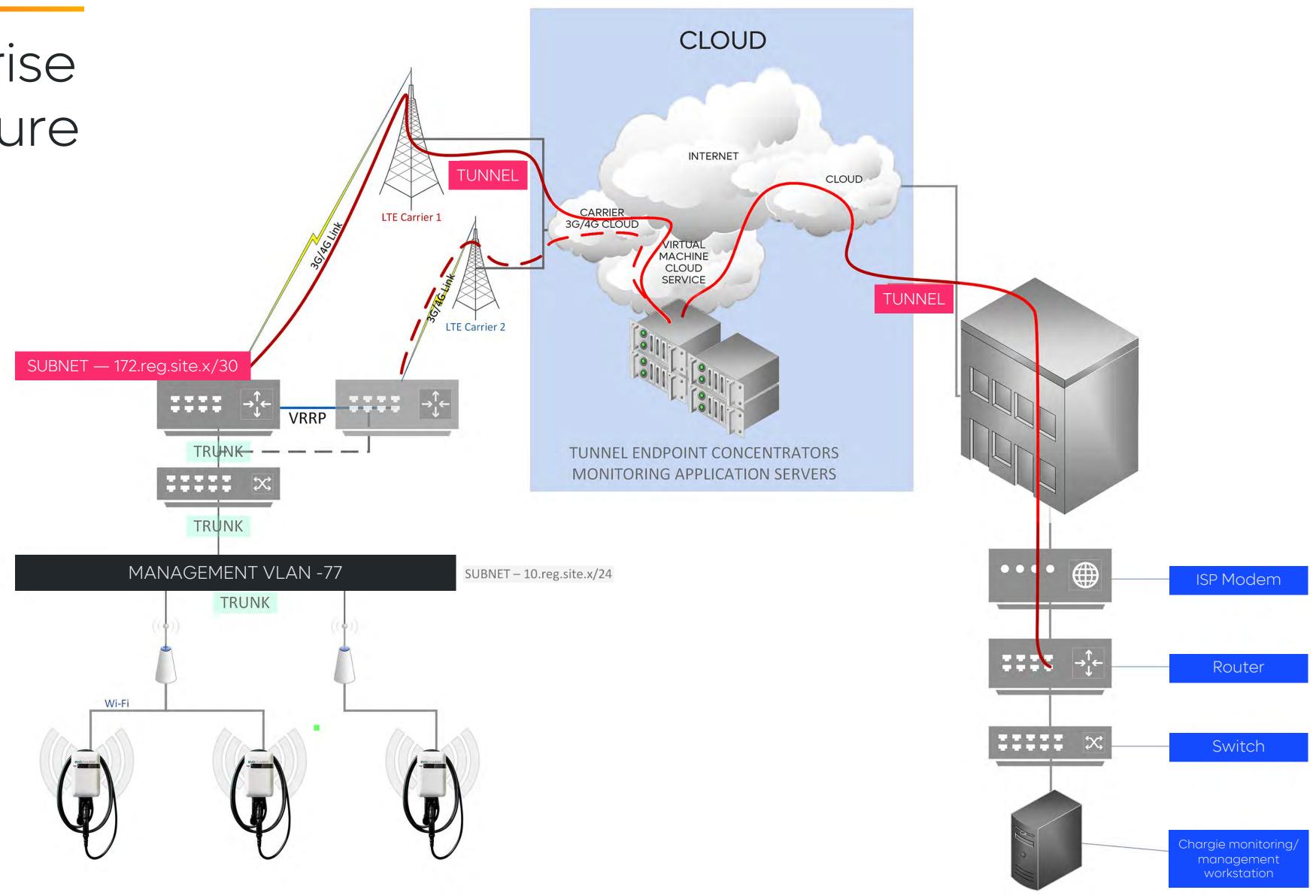
- Set pricing (§)
- Monitor usage 👸
- Optimize charging (9)
  - Create reports



Scale with enterprise network architecture

Engineered to be a high availability, scalable, economic, and future growth capacity network.

For service areas with poor cellular service, we install boosters to ensure a stronger signal.



# Trust in industry leading Service Operations

An escalation protocol between tiers is in place to ensure all critical and complex issues are addressed and resolved within Service Level Agreements.





Tier 1 Tier 3 Tier 4

Account Service & Support

Manages onshore support related to customer sales, services, and accounts.

Technical Service & Support

Manages support of access to the network(s)/service(s) and/or other technical issues.

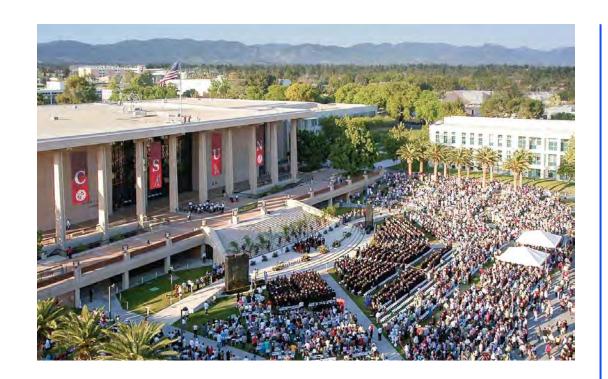
Network Operations Center (NOC)

Fault mitigation, performance management, network maintenance and support, issue ticketing and internal/external escalation.

Field Operations

This team fields any technical issues that cannot be handled by the Network Operations Center (NOC) technicians.

# Recent Projects



# **CSU, Northridge**

7+ million gross sq ft university campus

88 stations

Level 2 & 3 chargers

March 2022 activation



# **Amazon Ring HQ**

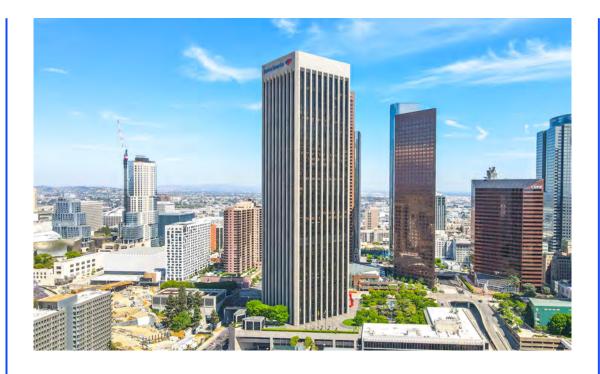
Corporate office campus

49

stations

Level 2 chargers

March 2022 activation



#### **Bank of America Plaza**

55-story office property

40

stations

Level 2

chargers

March 2021

activation



#### **Kaiser Permanente**

Major healthcare consortium

35

stations on two campuses

Level 2

chargers

June 2021

activation

# Chargie

Chargie.com © 2022 Chargie













Veteran Owned Small Business
GSA EVSE Blanket Purchasing Agreement
GSA 4<sup>th</sup> Party Logistics United States Coast Guard – 5 Years \$50,000,000
GSA 4<sup>th</sup> Party Logistics for United States Marine Corps – 5 Years, \$950,000,000

















# **Leaders in the Military Resale Market**

**Best People + Processes + Systems = RESULTS!** 









## TURNKEY EVSE SOLUTIONS FOR GSA

BPA #47QMCA22A0011

**CLIN 0002:** EVgo Level 2 Chargers: 7.2 kW – 19.2 kW (Purchase)

CLIN 0003: EVgo Level 3 / DC Fast Chargers: 50 kW – 350 kW (Charging as a Service

(ChaaS) and Direct Purchase)

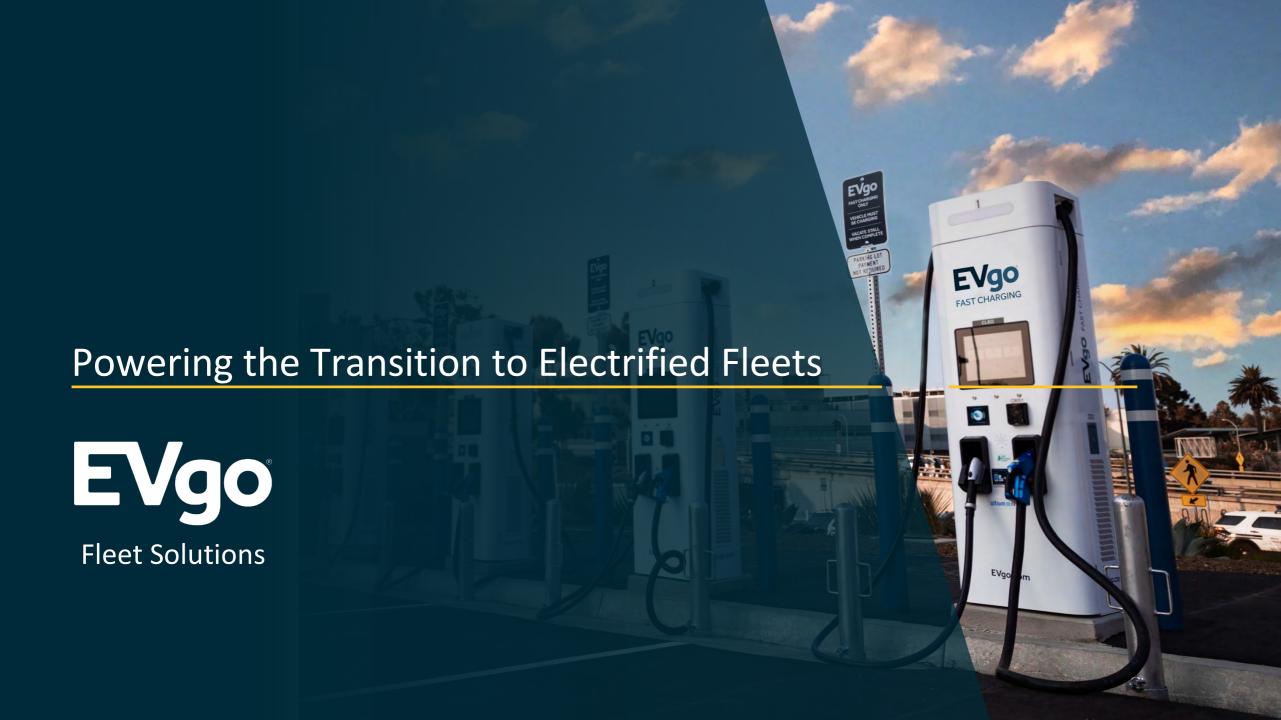
**CLIN 0006:** Site Planning & Ancillary Services

**CLIN 0007:** EVgo Power Management & Metering

**CLIN 0008:** EVgo Network Plans & Data Packages: EVgo Optima™

**CLIN 0009:** EVgo Operation, Repair & Maintenance Plans: EVgold™

3



# EVgo GSA FLEET PRESENTATION TEAM





Paul Carp Senior Director, Business Development – Fleets



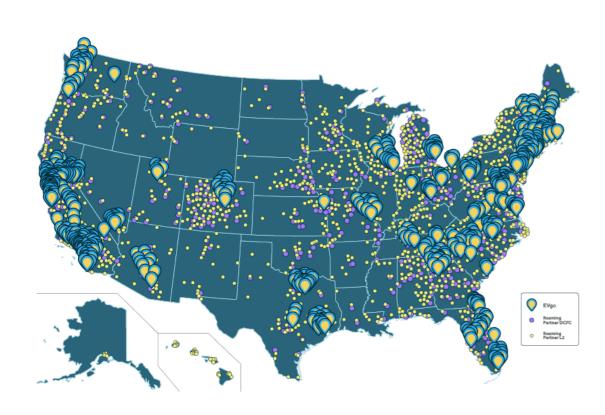
Colin Murchie Senior Director, Business Development



Robb Lichtman
Senior Manager, Business
Development – Fleets

# EVgo IS THE NATION'S LARGEST PUBLIC EV FAST CHARGING NETWORK





850+ stations in 60 cities across 30 states



Reliable Committed to 98% network uptime



Sustainable Powered by 100% Renewable Energy



130 MM People live within a 10-minute drive of an EVgo station



750,000+
EV driving
customer accounts



EV Compatibility
Serves all fast-charging
standards – including Tesla



Drivers Love Us Average rating of 8.0+ on Plugshare

#### EVgo's Partners Include:





SIMON







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# EVgo: A FIRST MOVER ON FLEET **ELECTRIFICATION**

A DECADE-LONG TRACK RECORD OF SUCCESS CATALYZED BY ENDURING **PARTNERSHIPS** 



2010



2012



First in OEM partnerships

2014





First 150kW Charger in the U.S.



Won ESNA award for storage project

2016



charger



First to win Appendix D grant statewide



First dedicated rideshare charging depots





First to partner with **Avis Budget** 

#### ultium **≡** ready



First nationwide infra buildout



First to partner with autonomous fleet



First to emphasize

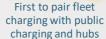
dynamic power sharing

for fleets

2021



First charging network with integrated Tesla connectors



34 States 68 major metropolitan areas

> 100% Renewable energy powered

818

#1 in DC fast-charging sites

1,412

**Current DC Fast chargers** 

300,000+

**Customer accounts** 

**GM Fleet Ultium 360** Preferred fleet charging partner

> **AV Fleet Hubs** Multiple operational

**Partnerships** Samsara, Merchants Fleet, Electric Last Mile Solutions, and more...

**TODAY** 

First to offer modular mobile DCFC

2018



2019

First to go

100% renewable

First to 800

locations

First multi-city

partner with Lyft

Uber

First to partner

with Uber

First to implement bilateral interoperability

2020

1) Based on company estimates of 2020E kWh market share, excluding Tesla. EVgo has 34% market share of urban DC Fast Chargers based on Plugshare public DC Fast Chargers with capacity greater than or equal to 44 kW, including, non-networked chargers and excluding Tesla Superchargers captive to Tesla EVs, as of 9/30/20. "Urban" includes ATL, BAL, BOS, CHI, DC, DEN, DFW, HOU, LA, MIA, NYC, PHIL, PORT, SAN, SD, SEA, SFBA.

2017

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## GM and Pilot Company to build a coast-to-coast fast charging network.



- 2,000 EV charging stalls will be installed at up to 500 Pilot and Flying J travel centers
- Will help enable coast-to-coast EV travel and connect communities across America
- Initial Phase 1 EV charging stalls (shown in reference map) expected to be operational in 2023
- Chargers will be capable of delivering up to 350kW\*





# EVgo: POWERING THE TRANSITION TO ELECTRIFIED TRANSPORTATION

- Fleet Depot Solutions
  - For mission-critical fleet charging at your base of operations
- EVgo Public Network

For extending range and resiliency through access to distributed charging

Dedicated EV Charger Hubs

For those without a depot or who need supplemental capacity away from base







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## AVAILABLE HARDWARE UNDER THE BPA

#### DESIGNED FOR RELIABILITY AND UPTIME









For longer dwell times

**EVgo Fleet Hardware Portfolio** 

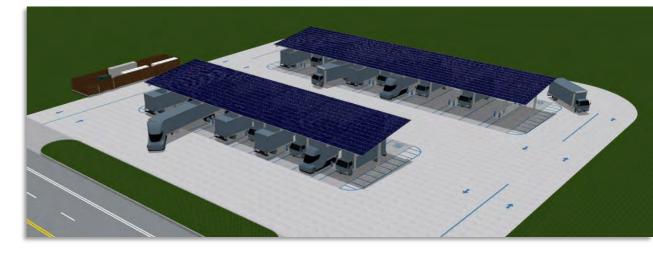
For shorter dwell times

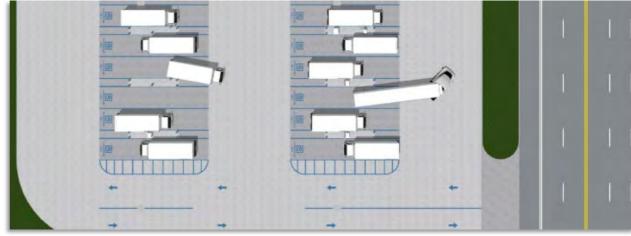
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# FUTURE-PROOFED SITE DESIGNS FOR DEPOT ELECTRIFICATION

#### **DESIGN CONSIDERATIONS**

- + Safety
- + Vehicle specification
- + Operational needs
- + Pull-through site design
- + Redundant charging
- + Future proofing

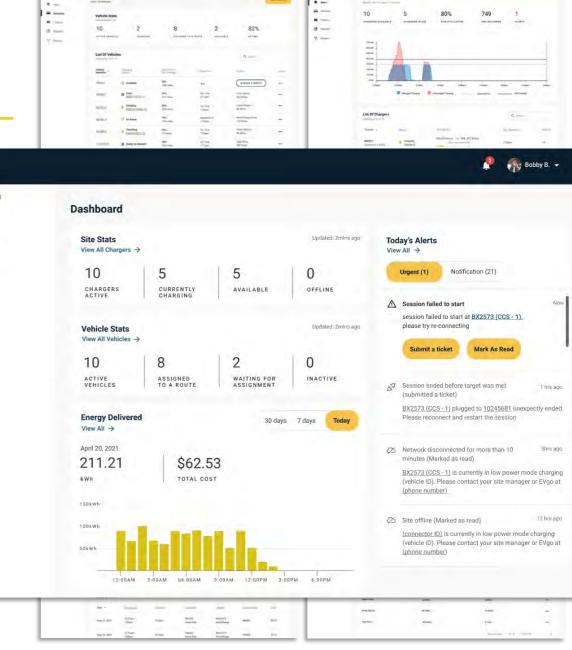




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## EVgo OPTIMA™ SMART CHARGING SOFTWARE

**Real-Time Monitoring** Charger & Vehicle Management **Transaction Management Advanced Analytics & Reporting Network Uptime & Support Energy Management** Smart Charging & Scheduling **Systems Integrations** 



© 2022 EVGO. ALL RIGHTS RESERVED.

**EVgo** 

4 Dashboar

Vehicles

Tickets

Reports

\* Routes

# SOLVING CHALLENGES TOGETHER

CHALLENGES/OPPORTUNITIES FOR FLEET OPERATORS:

- Total cost of ownership
- Reliability of fuel switching
- Mixed fleet vehicles and providers
- Variable duty cycles and shifts
- Design considerations to match operational needs
- Future proofing: from pilots to scale



## EVgold™

### **OPERATIONS & MAINTENANCE**

- ✓ Proactive Monitoring: continuous monitoring to identify potential problems early
- ✓ Preventative Maintenance: regular on-site inspections to ensure reliability
- Corrective Maintenance and SLAs: protocols for emergency repairs
- ✓ Labor and Parts Warranty for up to 5 years: reduces unexpected costs
- ✓ 24x7 Driver Support: available to assist fleet drivers and managers.

Results in industry leading SLA backed

98% UPTIME GUARANTEE





# **Electric Vehicle Charging**



Presented by: Dominic Day, The Lioce Group, Inc.
Nick Gameos, SemaConnect



#### **SemaConnect**

# The Lioce Group, Inc.

- •Founded: 1967
- Offices in Huntsville and Birmingham, Alabama
- DoD Secret Facility DoD Cleared Personnel
- Certified Small Business
- •Net Promotor Score of 97.22%
- •GSA Schedule 70 Contract Holder
- DFARS and NIST Compliant
- •CMMC Level 1 in 2022
- •Expertise in identifying customer needs, targeting latest technologies to reduce paper footprint, maximizing customer productivity & streamlining processes



## Who We Are

SemaConnect is a leader and pioneer in EV charging looking to make the electrification of transport possible in this decade by developing and deploying smart, innovative, and cost-effective EV charging solutions worldwide.



Over **17,000 stations**throughout
North America



Over 1 million +++
charging sessions every
year



Nearly **150,000 users** on our smart network management platform

## **Customers We Serve**

























**CBRE** 













































**Newell Rubbermaid** 

























# **Charging Options**

SC DCFC 30kw-350KW **Series 7 & 7 Plus** up to 19.2 kW / 80A





Home Charging

Fleet/Public Char

Public Charging

**Series 4** 12 kW / 16 - 50A



**Series 8** 7.2 kW / 30A

# **EV Charging Station Product Portfolio**

#### **Series 4**

Single Family Home Application

#### **Series 5**

Multifamily Applications (Personal)

#### **Series 6**

Multifamily & Commercial Applications (Shared)

### Series 7 & 7 Plus

Fleets
Applications

#### **Series 8**

Retail Applications











# Series 7 & 7 Plus EV Chargers

#### Series 7 – up to 7.2 kW (30 amps) per port for standard cars & trucks

- Sleek & compact form factor with rugged outdoor-rated aluminum enclosure
- "At-a-glance" LED status lights
- Wireless technology & cloud-based station management platform
- Smart phone or smart card user access & messaging capabilities

### Series 7 Plus - up to 19.2kW (48, 80 amps) per port

- Most powerful Level 2 fleet charging solution
- Cost-effective solution for fleets that want to maximize power while minimizing costs
- Requires less make-ready work than DCFC





### The Series 8

One of the most convenient EV charging stations available.

The Series 8 (48-80A) - Retail EV Charging Station was designed for commercial applications where drivers are likely to pay with a credit card. This means **no membership is required to charge your vehicle**.

This is perfect for all commercial applications, including College campuses, shopping malls, hospitals, municipal parking, and any retail location.

NO MEMBERSHIP REQUIRED

VISA

AMERICAN

EXPRESS

DISCOVER

NETWORK

SEBERBECOCYBER

FUNDSShare

PAY WITH \*\*\*\*First integrated credit card transaction device in the Market\*\*\*\*

## DCFC Product Line 24kw-350kw. (CCS/CHADEMO)







# SemaConnect Charging Stations Key Features

- Form Factor
- Smart Charger Interoperability
- **Software Platform Customizable**
- Ease of Installation
- Full Warranty



#### **SemaConnect**

## Interoperability

Certified OCPP 1.6, OCPI, OPEN ADR 2.0B





Increase EV deployment speeds and improve operational efficiency



Identify and resolve charging issues quickly with live status and error notification



Develop a holistic view of your fleet with comprehensive data reporting

# Hardware is Complemented with Robust Software and Services Offerings

Software and Services for Station Owners





#### Access Control

Easily configure
 access policy using
 pre-packaged member
 groups



### Station-Owner Software

Enables station
 owners to easily
 configure and manage
 their charging program

24/7 technical support



### Usage Tracking / Analytics / Diagnostics

Create reports for analysis on transactions, energy, revenue, daily usage, utilization and sustainability



### Over-the-Air Updates

✓ Instantaneous wireless updates for new software

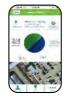
Software and Services for EV Drivers





#### Messaging

Preferred messaging alerts via email or text for sharing and event notification



#### **User-Friendly App**

Helps drivers easily manage their charging needs with preferred messaging alerts and location services





#### **Automated Payments**

Seamless app-agnostic payment processing from drivers to station owners



#### **Driver Support**

Dedicated support team for account management, 24/7 assistance



## Station Management Software



#### Monitor Your Program with Usage Reports

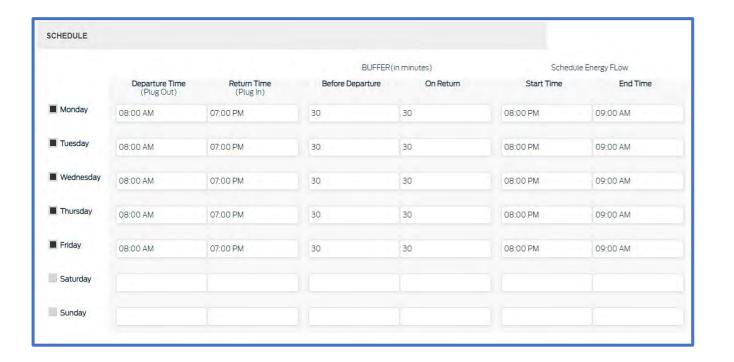
- Transaction
  - Detailed per session data
- Energy
  - kWh's delivered & electricity cost
- Revenue
  - Driver revenue captured, organized by station group
- Utilization
  - Station utilization, organized by station group
- Daily Usage Analysis
  - Usage frequency breakdown by hour of the day
- Sustainability
  - Carbon offset and fossil fuel reduced reports

### **SemaConnect**

## Software Overview

#### <u>Group Configuration – Configure Constraints</u>

Chargers		Vehicles	Constrain	its	Alerts	Payr	nents		
ENERGY LEV	/ELS								
Minimum	20	kWh	Maximum	50	kWh	Target	30	kWh	



#### **Group Configuration - Configure Alerts**

Chargers	Vehicles	Constraints	Alerts	Payments	
ALERTS					
Notify the associate  Plug Out Time (De		ge on any of the followin	g events by the vehi	licte driver	
Plug Out with Targ	The state of the s				
Plug In Time (Retu	urn)				

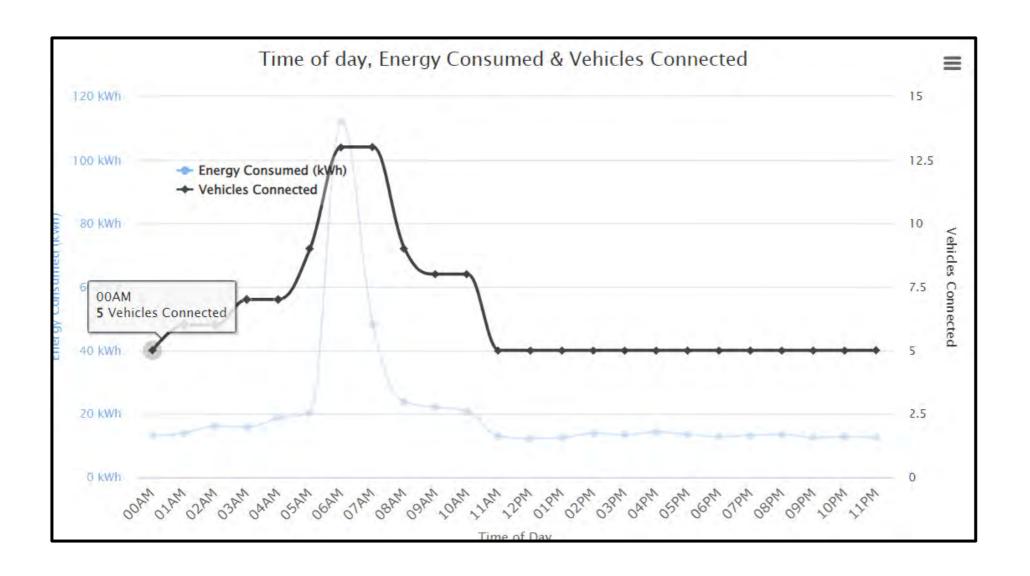
#### **Group Configuration – Payments for Public Charging**

PUBLIC CHARGING AND PAYMENT CARD						
Allow vehicles in	this group to charge	e at public places or charging sta	tions outside the network and pay by credit card.			
Provide card inform  Card Number*	ation here to be use	d at public charging stations				
Expiration Date*	MM	YY				
CVV-						

## Software Overview Usage Analytics



### Load Management Software-Time of Use



#### **SemaConnect**

## **Contract Vehicles**

- GSA MAS
  - 47QTCA18D00AD





- GSA EVSE BPA
  - 47QMCA22A0010





## 5 Reason to Choose SemaConnect

- Complete Turn-Key EV Charging Solution
- **Competitive Cost**



- Comprehensive Peak, Load, Fuel, Demand Charging Reporting
- Integrations OCCP 1.6, OCPI, OPEN ADR 2.0B: WEX, VOYAGER, Parking, BMS, and More
- Service: 98% SLA uptime, less 1% failure rate; No Cost Hot Swap program

# Questions?





Carahsoft: EV Charging for Federal Agencies

# GSA BPA Workshop August 2, 2022

**BPA Award by GSA Office of Fleet to Carahsoft:** #47QMCA22A0005



-chargepoin+

## Carahsoft Overview: 2022 Robust Solutions Portfolio

<b>vm</b> ware <sup>®</sup>	<b>D&amp;LL</b> Technologies	VERITAS	NVIDIA.	<b>(5</b> ).	Adobe	SAP NS2.  NATIONAL SECURITY SERVICES	Red Hat
splunk>	paloalto®	<b>⋈</b> McAfee	<) FORESCOUT.	← FIREEYE*	Gigamon <sup>®</sup>	RSΛ	Infoblox **
aws		Microsoft Azure	servicenow	salesforce	BROADCOM*  Ca technologies  Symantec.	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Government Solutions
‡‡‡ + a p   s a n.	A ATLASSIAN	# slack	-chargepoin+	zoom	DocuSign	solarwinds	CLOUDERA



































Carahsoft Technology Corp. Proprietary & Confidential

## Comprehensive Portfolio to Fit Every Need

#### Software



- + Access control: Who can use the stations and when
- + Pricing: Site host can choose to set fees
- + Waitlist: Drivers can get in line when all ports are occupied
- + Scheduled charging
- + Power sharing to maximize ports while avoiding costly upgrades
- + Proactive and remote diagnosis
- + Power management to avoid demand charges

#### Hardware



- + Solutions for every use case, all vehicle types and brands
- + High efficiency in power and footprint
- + Modular, scalable, secure architecture designed for serviceability
- + Unparalleled quality: advanced testing (vehicle, functional, climate, environment) for long-term reliability
- + Options for site hosts to use custom branding

#### Services



- + Accurate site qualification, quality site preparation and professional installation
- + Nationwide network of O&M partners
- + Initial activation and configuration services
- + Standard warranty coverage for one year
- + ChargePoint Assure maintenance and management program
- + Station owner phone support during business hours
- + 24/7 driver support in multiple languages

## Global and flexible charging hardware portfolio



## Most Advanced Charging Software and Services



#### **Dashboard & Analytics**

Station owners see how stations are being used and when it's time to add capacity.



#### Waitlist

Drivers can get in line and get notified when a station is available, improving utilization.



#### **Energy Management**

Efficiently and automatically utilize power available for charging vehicles. Save money on costly upgrades and avoid demand charges.



#### **Flexible Pricing**

Price by hour, kWh, time of day, customer type or any combination.



#### **Access Control**

Limit who can use the charging stations and when. Station owners can disable charging during "closed" times.



#### **Fleet Services**

Fleet managers can track vehicle charging and pay for electricity if the vehicles need to charge at other stations. WEX integration for easy payment.



#### **Driver Services**

Automatically notify drivers of a full charge, available station, changes in power and more.



#### **APIs**

Most functions are also available through SOAP/XML and REST APIs that follow the same data access rules as the UI.

## **Networked stations:**

## The smartest way to offer EV Charging

- ✓ Pay less for install, using common power close to parking spaces, not individual resident meters
- ✓ Measure and bill customers for usage
- ✓ Enable and encourage sharing with "Waitlist" and "overstay pricing" features
- ✓ Scale to future demand with energy management charge more cars on the same electrical capacity and avoid demand charges
- ✓ Future Proof over-air software upgrades ensure latest features and vehicle compatibility
- **✓** Integrations





## Network Manager Dashboard (GOV and POV Management)



The Network Manager portal gives access to metrics to measure the stations success

## **En-Route Charging**

#### **Roaming Partners**





#### **Payment Cards**



- + Over 80,000 public charging points on the ChargePoint network in NA (70% share)
- + Access to over 40,000 additional stations through roaming
- + Full integration with WEX (on site and en-route)

## Commitment to Safety and Quality.

- 16,000 square feet
- 2MW power budget
- Close to CP headquarters

Test Lab Capabilities							
Temperature Stress	Connector Cycling	Solar Loading					
Humidity Stress	Cable Load	Dust and Salt Exposure					
Wind Resistance	Swingarm Cycling	Long Term Load Stress					
Water/Rain Exposure	Drop Impact (package)	Drop Impact (system)					
UV Exposure	Dynamic Impact	Vibration (seismic, random)					



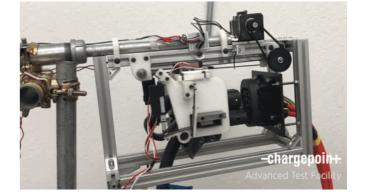
**Connector Cycling** 

**Impact Testing** 



**Solar Load and UV Exposure** 





# ChargePoint Assure Proactive Maintenance & Warranty

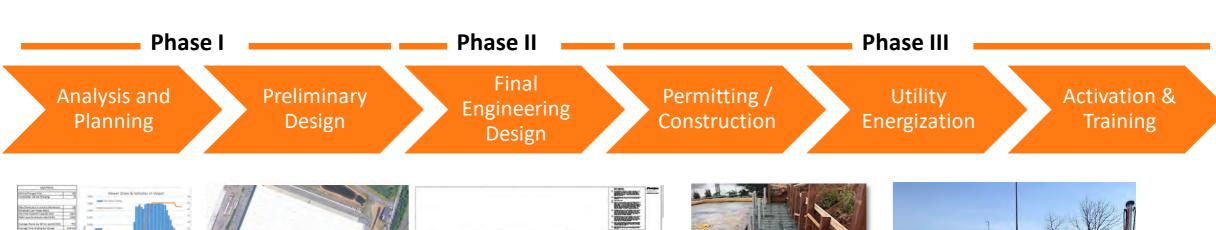
Industry leading parts and on-site labor warranty allowing you to focus on leasing & resident satisfaction



#### **Key Benefits:**

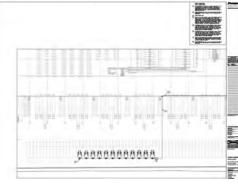
- Proactive Monitoring
  - ChargePoint often knows about a problem before the host and will contact the host for proactive repairs
  - Proactive support and reliability with virtually no administrative efforts or unexpected costs annually
- + Includes all Parts and On-Site Labor to repair or replace product defects
  - One business day on-site response or one business day from parts delivery.
     ChargePoint assumes all triage and repair coordination responsibilities
- + Monthly and quarterly reporting/analytics emailed to station owners
- + 98% Annual Uptime Guarantee with non-performance penalties

#### **Support Your Electrification Process**













- + Full project services to ensure success of your program
- + We manage the process and the details, so you don't have to
- + Leverage ChargePoint's nationwide network of contractors or we can work with your own
- + Turn-key quotes using GSA service SKU's added to BPA CLIN's
  - Site Walks available upon request



Traditional Hardware Ownership Model





2. Cloud Services (Software)





4. Site Validation or Commissioning

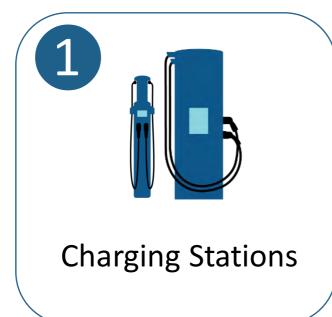


5. Station Activation



## CPaaS: What's included?







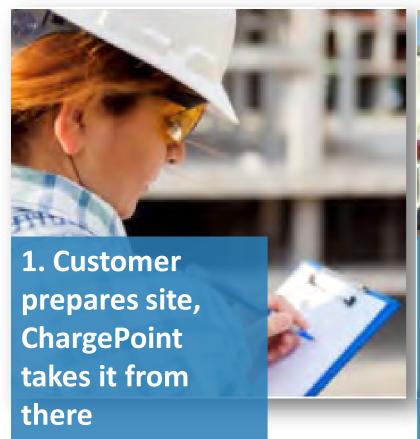


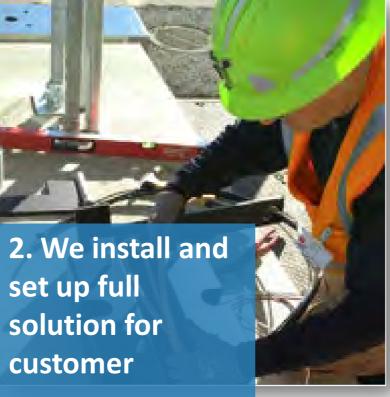






## CPaaS: 3 Simple Steps







<sup>\*</sup> Make-ready NOT included

## Thank You!

For further information, feel free to reach out to us:

Matt Bianco
President
FedWay Consulting, LLC
mbianco@fedwayconsulting.com
(571) 643-1505

Casey Oesterle
Senior Account Manager
Carahsoft Technology Corp.
Casey.Oesterle@carahsoft.com

(571)-662-3010

# EV Fleet Charging Solution











**BPA Contract number:** 

47QMCA22A0009

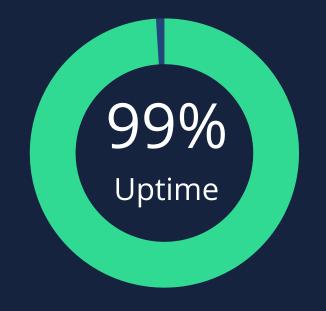
## Company Overview

Site Design | Funding Assistance | Consultation | Installation | Customer Support

# Who Are We?

- Livingston Software & Hardware
  - Developer | Manufacturer | Supplier | Contractor
- Trusted Government Awardee
  - GSA | Sourcewell | TIPS | Florida Buy
- Customizable & Flexible Project Solutions



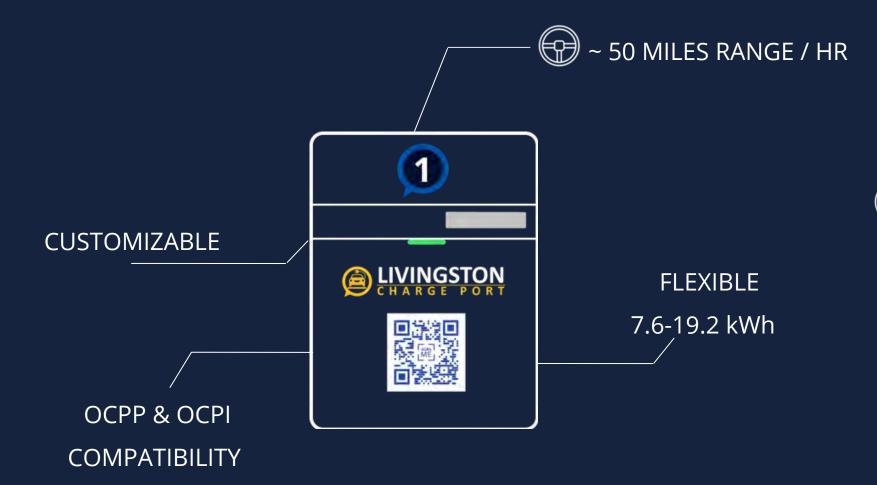






## Industry Leading Technology

Level 2 Charge Solution CP 208



Level 3 Charge Solution DCFC





## Scalable Software Solution

From 5 vehicles to 5,000 our Smart Charging Software will scale with your fleet

**≺** Back

Public

Liberty Street

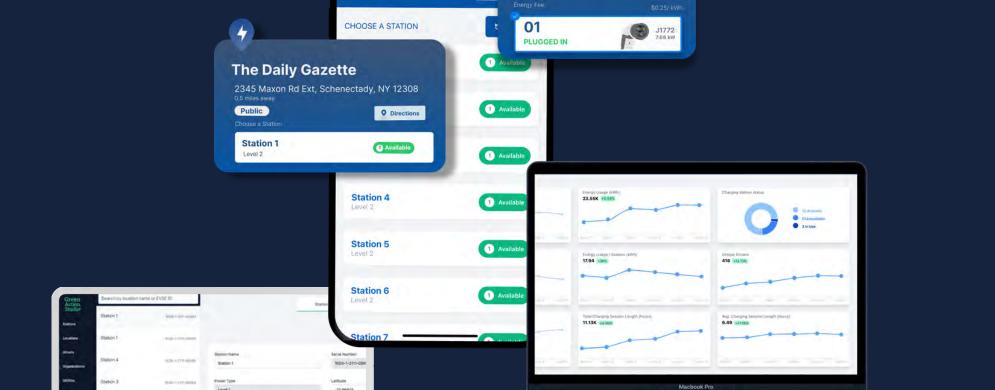


**Network Monitoring** 









Network Admin Portal

Station 1



Pricing Control & Monitoring

Charge Management

Dashboard

**EV Driver Mobile App** 



Notification Systems





## Partnership Pathways

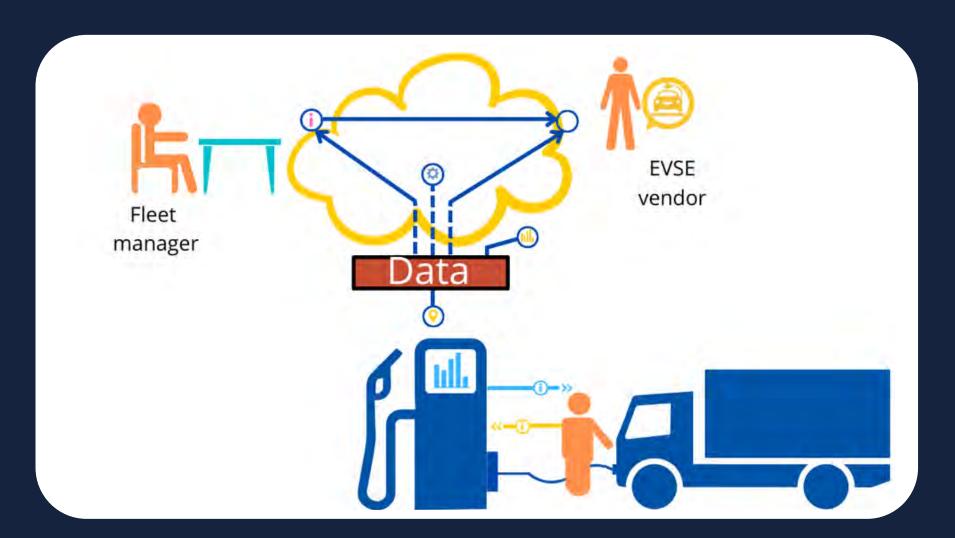
Customizable Project Packets Standard Projects & Fast Tracks Level 2 & DCFC Value-Add Full Services & Support Additional Project Solutions: Bidding Packets, Construction Integration, & More...





## EV Fleet Benefits

- Data driven decision making for fleet managers
- Lower Total Cost of Ownership (TCO)
- Less frequent PM intervals means less downtime and higher efficiency
- Future-proof your organization



## **Operational Cost Savings**



Commercial EVs have a nearly 20% lower cost of ownership when factoring in capital expense, maintenance, and fuel over their life when compared to traditional diesel trucks.

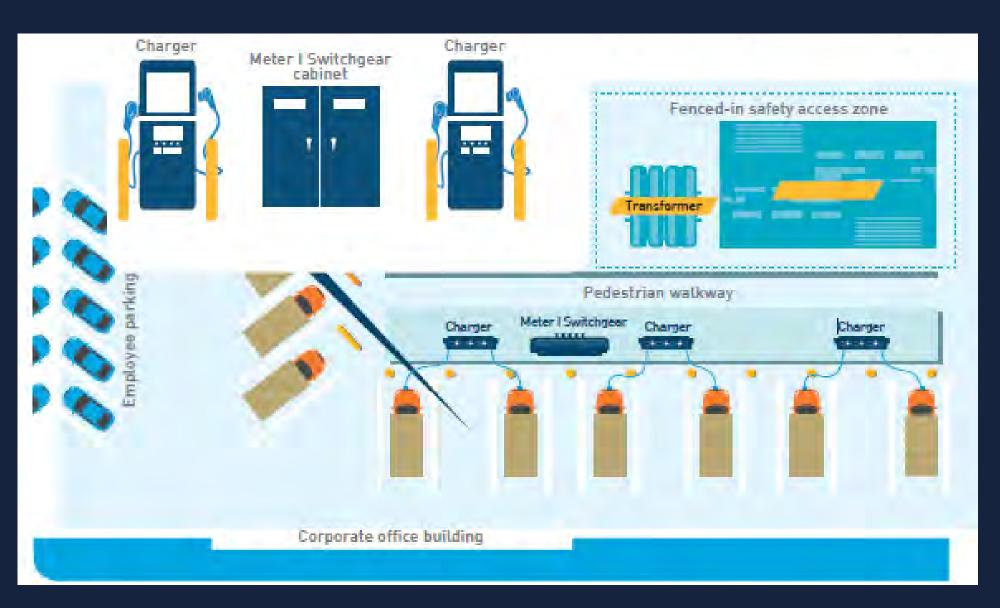
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# Make your location... ready for the future!

## **Our Team Of Experts Is Here To Help**

- 1 Equipment Evaluations
- 2 Site Design & Permitting
- 3 Installation & Networking
- 4 Servicing & Maintenance



Potential Level 3 electrical equipment layout at a charging depot

## Get More Info

## Will DeRuve

Phone

8

518-935-3073

Website



www.solution.energy

**Email Address** 



wderuve@solution.energy

Office Location



2345 Maxon Rd. Extension, Schenectady, NY, 12305



**BPA Contract number:** 

47QMCA22A0009









## **Future Events**

In-person customer vendor meetings

- Save the Date!
  - October 4th 2022, in-person **EVSE Showcase** at GSA's Headquarters at 1800 F Street in Washington, DC!
  - <u>FedFleet 2023</u> January 24-26, 2023
- Ideas? Let us know!

### Resources

EVSE Station Acquisition, ZEVs, Planning for ZEVs and other general EVSE resources



Find information on all of the products and offerings you heard today at <a href="mailto:gsa.gov/evse">gsa.gov/evse</a>

Local GSA Fleet Management
Center at <u>gsa.gov/fsr</u> or
GSA Fleet ZEV Team at
<u>gsafleetafvteam@gsa.gov</u>



gsa.gov/electrifythefleet

Design & Build services, Site Planning, Installation Assisted Acquisition



Facility Manager

For Multi-site Locations or general

questions:

GSA Center for EV Infrastructure at

pbs-evse-solutions@gsa.gov

Sell to Government 🗸

Real Estate ∨

Policy & Regulations ∨ S

Small Business V Trave

Technology

Home > Buy Through Us > Products & Services > Transportation & Logistics Services > Fleet Management > Vehicle Leasing > Alternative Fuel Vehicles > Electr

#### Vehicle Leasing

Overview

Find a Fleet Service Representative

Accidents and Maintenance

GSA Fleet Card

Telematics

Safety Training
Vehicle Rates

#### **Alternative Fuel Vehicles**

**Electric Vehicle Charging Stations** 

Sales of GSA Fleet Vehicles

Commercial Leasing from GSA Schedules

Vehicle Misuse & Reckless Driving

**GOV Recalls** 

#### **Electric Vehicle Charging Stations**

Work with GSA to procure electric vehicle charging stations also known as electric vehicle supply equipment (EVSE) to support zero-emission vehicles at your facility.

GSA has a variety of level 1, 2, and DC fast charging stations along with photovoltaic and portable stations. There are options for network and O&M plans, along with basic install assistance, site preparation, station activation and assembly. All ceiling prices may be discounted at the task order level. The GSA Blanket Purchase Agreements with Multiple Award Schedule (MAS) holders offers charging stations and ancillary services for over 1,100 products across more than 30 brands. These agreements:

- Streamline and simplify the buying process
- Reduced procurement time and costs
- Help meet projected EVSE demands
- Provide access to vendors that meet IT security, privacy, and SCRM requirements
- · Include both large and small businesses
- Allow for additional discounts from MAS

At this time only hardware that is not connected to or does not use a platform or network is available for ordering. Additional products will be added once approved for all GSAIT security and SCRM requirements. They will only be available for ordering through the BPA when approval is obtained. All available products maybe ordered through GSA's Multiple Award Schedule.

Learn more about available products and how you can integrate stations at your facility:

#### **EVSE BPA Information**

- 2022 EVSE BPA Fact Sheet [PDF 68 KB]
- EVSE BPA Offerings [XLSX 1 MB]
- . Ordering EVSE through MAS [PDF 226 KB]
- EVSE RFQ Template [DOCX 27 KB]
- EVSE BPA Ordering Guide [DOCX 265 KB]
- EVSE Statement of Work [PDF 295 KB]

# Check out gsa.gov/evse



## Thank you!

gsa.gov/evse

gsafleetafvteam@gsa.gov

## **Contacts from Today:**

- **□** District Fleet: <u>Dan MacDonald</u>
- □ PLEMCo: <u>Tim Hatiaman</u>
- Siemens: <u>Jim Plourde</u>, <u>Brandy Henson</u>
- □ PSC Energie: <u>Tom Tracey</u>, <u>Chris Vargas</u> and
  - **Danilo Tosovic**
- □ OSC: <u>Mark Shaffer</u> and <u>Colin Murchie</u>
- ☐ Lioce Group: <u>Dominic Day</u>
- ☐ Carahsoft: <u>Matt Bianco</u>, <u>Matt Rattigan</u> and <u>Casey Oesterle</u>
- ☐ Global Enterprises/Livingston: <u>Scotty Browning</u>, <u>Scott</u>

Smith, Will DeRuve and Randy Livermore





## **EV Charging Station Infrastructure**

Level-1 Charging 110V/120V

Level-2 Charging 208V/240V

## DC Fast Charger 208V/480V









- J1772 is standard
- 4-6 miles per hour charge time
- \$0-\$3K

- J1772 is standard (Tesla's
- 10-20 miles per hour charge time

come with adapter)

• \$500-\$12,000



Tesla, SAE Combo, CHAdeMO

- Most vehicles use CCS (Tesla comes with adapter) Nissan Leaf uses CHAdeMo
- 50-90 miles in 30 minutes
- **\$32,000+**

- Finding a charger <u>plugshare.com</u> or <u>DOE Alternative Fueling Station Locator</u>
- Sites like <u>abetterrouteplanner.com</u> help you plan for charging on trips



gsafleetafvteam@gsa.gov